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THE ASBESTOS SCHOOL HAZARD ABATEMENT ACT OF 1984—OVERSIGHT

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BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

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THE ASBESTOS SCHOOL HAZARD ABATEMENT ACT OF 1984—OVERSIGHT

FRIDAY, JULY 12, 1985

U.S. Senate,
Committee on Environment and Public Works,
Washington, DC.

The committee met, pursuant to notice, at 10:05 a.m., in room 406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Durenberger, Abdnor, Symms, Lautenberg, Moynihan, and Baucus.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator **Stafford**. The Committee on Environment and Public Works will please come to order. In view of the time available and the number of witnesses that will be appearing we're going to start now. I expect other Senators from the committee will be coming in when their commitments allow them to do so.

Today, the committee will examine the problems of asbestos contamination of schools and other public buildings. According to the estimates I have seen, some 31,000 schools and 733,000 public buildings contain asbestos that could easily be crumbled into toxic dust. In the schools alone some 15 million school children, and 1.4 million school employees are potentially at risk from inhaling its deadly fibers.

I say potentially at risk because in many cases the asbestos is intact and does not present an immediate health threat. But there have been too many reports of serious asbestos contamination to believe that cleanup efforts can wait.

At the same time we hear disturbing reports of cleanup projects that have gone wrong, of contamination made worse, of untrained people knocking out walls and throwing asbestos out of the windows.

Today, we hope to get answers to some key questions: How serious is the risk from asbestos contamination? How can individual cases of bad contamination be identified? Is the Environmental Protection Agency doing all it should to help school districts recognize and deal with asbestos contamination? How can we make sure that abatement projects are done right without losing momentum in the overall program?

Congress has already taken one important step in enacting the Asbestos School Hazard Abatement Act of 1984, which provide loans and grants to schools that otherwise could not afford to solve their asbestos problems. I am pleased to have been a cosponsor of this bill, and I want to congratulate Senator Abdnor, its sponsor, for his hard work in bringing this program into law and for getting here in time to hear me say it.

I also want to congratulate the Administrator and staff of the Environmental Protection Agency. The law set tight deadlines for getting the program into place, and the Agency has met them. This is a somewhat unusual occurrence, but one which we can hope will become more commonplace.

As this hearing proceeds, witnesses from the Federal, State, and local levels will offer their perspectives on the Asbestos Abatement Program. We need to hear those perspectives. But what this hearing really is about is people. It's about children and teachers in classrooms with asbestos ceilings, it's about service employees in boiler rooms with asbestos insulation, it's about workers called in to remove crumbling asbestos. It's about the unknown numbers of people who work in buildings that contain asbestos that has not yet been found or even inspected. And it's about homeowners and renters, ordinary people, who may be exposed to asbestos in their own homes.

In other words, our real concern is for the health and safety of our people, and the Asbestos Abatement Program must be judged by whether it is protecting people from asbestos diseases.

I'll close this statement with a personal comment. This Senator is especially concerned about asbestos in schools. I have devoted much of my Senate career to achieving two goals; improving the quality of education, and reducing environmental pollution from hazardous substances.

It is simply intolerable that we should send our children to schools with rooms that are contaminated with one of the worst indoor air pollutants that we know about. And we must do everything we possible can to make sure that students and school employees are assured a safe and healthy school environment.

I hope the witnesses today can tell this committee whether we're doing enough and, if not, what more we should be doing.

The Chair is going to reserve the right to members of the committee who are not here to enter their opening remarks, if they have them, in the record immediately following those of the members who are here.

And the Chair would recognize Senator Durenberger if you have an opening statement.

Senator DURENBERGER. Mr. Chairman, I will, in deference to my other colleagues and particularly our first witness, pass my statement until after he has completed his opening statement.

Senator STAFFORD. All right. Senator Abdnor, do you have an opening statement?

Senator ABDNOR. Yes; Mr. Chairman, I would like to make a few comments.

Senator STAFFORD. All right.

OPENING STATEMENT OF HON. JAMES ABDNOR, U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator ABDNOR. I want to thank you for scheduling this oversight hearing on the Asbestos School Hazard Abatement Act of 1984. I believe we will find the testimony we hear today of great help as we continue to develop budgetary priorities for the coming year.

As you said, Mr. Chairman, and I greatly appreciated the fact that you supported and coauthored the legislation for this program. I offered ASHAA as a floor amendment to the Education for Economic Security Act of June 6, 1984. A number of our committee colleagues joined us in sponsoring this important legislation, including Senator Randolph, our former ranking minority member, and Senators Chafee, Moynihan, Lautenberg, Durenberger, Burdick, and Mitchell have all given us a lot of help.

I'm pleased that today we will have the opportunity to hear the testimony of another cosponsor of ASHAA, Senator Sasser. We worked closely with a number of organizations, many of whom are represented here today, in developing ASHAA.

The mere mention of asbestos, in some instances, provokes panic among parents. Asbestos, after all, is a known cause of serious lung disease, including asbestosis and lung cancer, and children are believed to be at a greater risk of contracting asbestos relating diseases due, in part, to the developing period of their lives. Prior to ASHAA, EPA did little to assist schools in coping with the presence of potentially hazardous asbestos.

On June 6 of this year, the Environmental Protection Agency made the first round of asbestos abatement awards to school districts which have demonstrated financial need. I wish to commend the Agency for meeting the deadline established under ASHAA, and I know it wasn't easy. From the applications of some 1,100 school districts, EPA has selected 341 which will receive financial assistance for necessary asbestos abatement projects.

The Agency has developed six hazardous ranking category projects in schools classified in EPA's priority 1 hazard category—those with the most serious problems—numbered about 1,200 at a total cost of $100 million. To date, $50 million has been appropriated for ASHAA, $5 million of which is being utilized by the Agency for both enhancing its technical assistance efforts, and developing a model contractor training and certification program. The $45 million is being expended in the form of no-interest loans and grants to eligible school districts.

I'm pleased to note that the fiscal year 1985 general supplemental appropriations measure, approved recently by the Senate, contains an additional $5 million for ASHAA. These funds are earmarked for technical assistance to schools, With up to $2.5 million to be awarded to the schools for implementing contractor training and certification programs, based upon the EPA's model.

The House passed bill does not include any funds for ASHAA. However, as a member of the House-Senate Conference Committee on H.R. 2577, I am hopeful that the House will agree to the ASHAA language approved by the Senate.

In the first phase of the process, the House Appropriations Subcommittee on HUD and Independent Agencies has included in its 1986 funding recommendations $50 million, of the $100 million authorized, for ASHAA. I will continue to work with several of my colleagues on the Senate Appropriations Subcommittee, including Senator Lautenberg, to obtain fiscal year 1986 funds for ASHAA.

Mr. Chairman, ASHAA was enacted only 11 months ago. And since its enactment EPA has established, within Dr. Moore's office, the Asbestos Action Program. Drawing from the State of Maryland's asbestos abatement contractor specifications and Georgia Tech's Contractor Training Program, the Agency has developed a model contractor training and certification program. Regional training centers have been established at Georgia Tech, Tufts University, and Kansas University. I am advised that seven States now have in place contractor programs.

EPA has revised its asbestos abatement guidance document, the so called blue book. Information detailing the extent and the location of friable or damaged asbestos containing materials, on a building by building basis, has been collected from school districts in almost all of the 50 States.

States have become more involved, perhaps in part, because they play a role in determining which school districts have the most serious asbestos problems that are most deserving of financial assistance. And EPA has been given the opportunity to provide real help to school districts in mitigating a potentially serious threat to the health of school children and school employees.

I believe that these efforts will prove far more helpful to school districts, and far more effective in protecting our children, then has the Agency's school inspection and notification rule.

While we recognize some school districts were unable to meet this year's application deadline for ASHAA funds, we finally have a realistic indication of the extent to which our Nation's public and private schools contain potentially hazardous asbestos. From EPA's testimony, I believe we will see that there is a real need for additional funding.

Mr. Chairman, I know I have gone on for quite a while. I get rather involved and enthused about the program. You'll have to excuse me, but thank you very much.

Senator STAFFORD. Thank you very much, Senator Abdnor. Senator Lautenberg, who is a very valuable member of this committee has arrived. Senator, if you have an opening statement, we'd be glad to have it.

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. I thank you, Mr. Chairman. I welcome our distinguished witnesses this morning, particularly my esteemed colleague from Tennessee, Senator Sasser. I would also like to extend a welcoming hand to Mrs. LaVerne Grady, who's from Teaneck, NJ. She is going to be representing the National PTA this morning, and she has some important things to say.

Asbestos is an extremely hazardous material when its fibers are released into the air. Years after a person is exposed to the material, he or she can develop lung cancer, asbestosis, and other diseases. The potential harm to the Nation's school children has prompted our strong interest in asbestos hazard abatement.

In my community, the town and city I was born in, Patterson, NJ, we know the experience only too well. A friend of mine, as many young people from our high school did, worked in an asbestos company in his teenage years. Twenty-some years later he was advised that incidents of spots on his lungs and lung tumors were beginning to show up. He visited his physician to find out that he had lung cancer, and within a year he was gone. He was in his early forties. So, we're particularly aware of the hazard.

Dr. Selikoff, a renowned physician and scientist was also a Patterson resident, and he was the one who originally, I think, discovered the toxicity of asbestos.

This hearing is very timely, as it comes about during the summer. The children are out of school now, and it is a good opportunity for workers to get into those empty schools and clean up the asbestos. Around the country this work is going forward. For the first time some of it is being funded by the Federal Government.

Last year, I joined with other members of this committee, led by Chairman Stafford, my colleague Senator Abdnor, and others of our current colleagues, to draft the Asbestos School Hazard Abatement Act. This bill became law in August of last year, and this hearing is our first opportunity to examine what's happened with the legislation thus far.

A number of important issues need to be considered with regard to EPA's handling of asbestos this morning. I want to focus on two topics; contractor training and certification, and future Federal funding.

Asbestos is dangerous when its fibers are in the air. Inadequately trained workers can create a much greater hazard by poor removal methods than existed before any work was done. In New Jersey, last summer, untrained workers endangered both themselves and others as they attempted to remove asbestos in the schools without proper respect for the nature of the material. And this can't continue. Untrained workers can turn a potentially hazardous situation into a major health disaster, the full effect of which will not be known, as I indicated, for many years to come.

Without trained and certified contractors, the good intentions of asbestos abatement can turn into the hell of cancer, asbestosis, and other diseases.

EPA has been through the first round of grants. I view this round only as the first step of a multiyear program. We haven't had any requests from EPA for funds for fiscal year 1986, and it's disappointing and obviously not satisfactory to me and others who are interested in the subject.

Mr. Chairman, again I commend you for holding these hearings. I look forward to discussing these issues with our witnesses. I thank you.

Senator **Stafford**. Thank you very much, Senator Lautenberg. And now we'll go right to our first witness. We're delighted, pleased, and honored this morning that the very able Senator from Tennessee, Senator Jim Sasser, is here with us. We know of his prior involvement in problems with asbestos and its removal, and we're very happy to have you come and counsel with us this morning, Senator.

STATEMENT OF HON. JIM SASSER, U.S. SENATOR FROM THE STATE OF TENNESSEE

Senator SASSER. Thank you very much, Mr. Chairman. I would like to add my voice to that of many others in commending you, Mr. Chairman, and the distinguished members of this committee, for convening this hearing this morning and for your interest in this subject.

Mr. Chairman, as you know, in a few weeks millions of schoolchildren will return to school. These children are clearly our most treasured national resource. Now, I don't accept the argument that we, as a Nation, cannot afford to provide a safe environment for our children to study and learn. I do not accept the argument that the health of our children is not as important as spending billions and billions of dollars on new weapons systems. We can and must do what is necessary to remove this silent carcinogen of asbestos from the classrooms of this Nation.

Our obligation in this matter is not one that we can simply shrug off as it becomes inconvenient to meet. In my judgment, it is an obligation that with the help of the chairman and this committee, will be met.

As you are all well aware, the Asbestos School Hazard Abatement Act of 1984 set forth procedures by which schools and school districts could apply for Federal grants and loans to be used for asbestos abatement efforts.

I was actively involved, as were other members of this committee, in the work that went into that particular law. But now, almost a year since its passage, I can see that further measures are needed in order to comply with the congressional intent to end asbestos hazards.

The Environmental Protection Agency has recently announced the recipients of $45 million in grants and loans to private schools and public school systems. This is welcome news indeed. However, because of the tremendous costs of asbestos removal and the limit on funding for this purpose, only a tiny fraction of the problem will be addressed by this initial funding.

The fact is that much more is needed in terms of congressional appropriations for, and Environmental Protection Agency involvement in, the asbestos abatement program in this country.

The Environmental Protection Agency can, and should, in my judgment, provide greater services to the 50 States. This is not just my opinion, Mr. Chairman. This was made clear in a March 19, 1985, report of the General Accounting Office, which concludes that the Environmental Protection Agency does not provide sufficient information and technical guidance in order for States to gain the technical expertise they need before making asbestos abatement decisions.

Moreover, the Environmental Protection Agency does not provide definitive standards for exposure levels that should be abated. So, it's not clear to local school systems when abatement procedures are required, and what measures are best suited to their particular situations. A definitive standard is needed which specifies the level of exposure that warrants action.

Additionally, the Environmental Protection Agency must shorten, shorten considerably, the paperwork burden which is required of applicants for asbestos removal grants. By this time, the Environmental Protection Agency knows, or should know, what information is needed in order to evaluate applicant schools and applicant school districts. The extensive application process and paperwork has precluded the large majority of schools from applying for Federal funds.

For example, in my native State of Tennessee, out of 571 schools and school systems, only eight applications for Federal funds were received from my State. Of these, only three districts received funding. The feeling that I receive among and from school boards, and from school principals, is that too much is required by way of application and paperwork for such a slim chance of obtaining Federal grant or loan funds. The application forms, I submit, Mr. Chairman, must be shortened so that they cease to deter potential applicants.

In addition to action by the Environmental Protection Agency, this Committee and the Congress can assist in furthering asbestos abatement measures by appropriating the funds from the $600 million which was authorized in the 1984 act. The fiscal year 1984 appropriation of $50 million has not been followed by an appropriation for fiscal year 1985. And I am disturbed that the administration has requested no funding for asbestos abatement in either the fiscal year 1985 budget or the fiscal year 1986 budget requests, especially since the Environmental Protection Administrator has personally assured me that asbestos abatement is one of EPA's highest priorities.

So, Mr. Chairman, in conclusion, I believe it is imperative for this committee, under your leadership, and for this Congress, to again recognize its responsibility to our Nation's children. We should move forcefully to abate asbestos hazards in our school buildings and in other public buildings.

As I have indicated, I believe that the Congress and the Environmental Protection Agency can do much more to realize this goal. Mr. Chairman, I am confident that under your leadership, and with the interest shown by the distinguished members of this committee, that we can, and will, support timely efforts to make asbestos abatement a truly effective program.

Thank you, Mr. Chairman, for allowing me to appear here this morning.

Senator STAFFORD. Thank you very much, Senator Sasser. As I said, we appreciate your joining us. I have no questions, and we understand you may have other pressing duties and may have to leave.

Are there any questions from the members? If not, thank you again for coming and joining us. We look forward to working with you as to the results of this hearing.

Senator SASSER. Thank you, Mr. Chairman.

Senator STAFFORD. Some additional members have arrived. Gentlemen, my colleagues, if you have opening statements you wish to give, this would be a good time to do it, or to place them in the record, whichever.

Senator DURENBERGER. Mr. Chairman, having deferred earlier, I would appreciate——

Senator STAFFORD. All right, fine.

Senator DURENBERGER. Particularly in advance of Jack Moore's testimony, I think a few words about—I may be in advance characterizing his testimony, so if the Chair would——

Senator STAFFORD. If the gentleman would yield for just a second. We're going to call an unexpected witness before we get to Mr. Moore.

Senator DURENBERGER. With a bag over his head?

Senator STAFFORD. Certainly.

Senator DURENBERGER. Is this one of those hearings?

Senator STAFFORD. Well, we're going to call Dr. Falk to help set the stage here.

Senator DURENBERGER. OK, I'll do it now. I was concerned about Jim Sasser.

Senator STAFFORD. All right.

OPENING STATEMENT OF HON. DAVE DURENBERGER, U.S. SENATOR FROM THE STATE OF MINNESOTA

Senator DURENBERGER. If you view what we, as the Federal Government, have been doing from the perspective of the schoolhouse, it must appear to people that there are really two Federal Governments in this country. One which is concerned about the asbestos problem, and one which is clearly not.

Despite your excellent efforts, Mr. Chairman, and those of our colleagues, particularly my colleagues Jim Abdnor and Pat Moynihan, who have been the leaders with you in this area, the Federal Government has for the last 5 years, and continues today, to go in two very different directions at the same time on the problem of asbestos in schools and other buildings.

If we review the history we find, in 1980, Congress passed a grant program to assist school districts with this asbestos inspection and hazardous abatement, but we never made any appropriations under the program. In 1982 EPA concluded a rulemaking under the Toxic Substances Control Act on asbestos in schools. That rule, in proposal form, included a mandatory abatement element, but under the final rule, abatement of asbestos hazards is entirely voluntary.

The rule requires inspection and notification for friable asbestos, but friable is a subjective term, as we will find out. There is no objective standard included in the rule to indicate clearly when a hazard is present and when it is not.

The rule is for schools only, but there are, according to an EPA survey, at least 730,000 other public and commercial buildings which contain asbestos under the same condition. EPA has done nothing, literally nothing, about the potential hazard present to workers in those buildings, many of which are owned by the Federal Government.

The 1982 inspection and notification rule was a one-time rule. The deadline was 1983 and today it's dead. There is no requirement for ongoing inspection, although most of the asbestos remains in the buildings. Despite evidence that compliance with the first rule was far from complete, there is no requirement for reinspection.

As a result of Federal action, or attention, many schools have rushed into multi-million-dollar programs to abate what they believe to be serious hazards, only to be told by the Federal Government that their actions may in fact have made the problems worse, and have exposed their maintenance personnel to serious health risks.

To deal with the so-called contractor problem the EPA set up training centers at three universities and are proposing a fourth on the west coast. At the same time, the evidence before the committee is that the three existing centers are now under notice that there aren't sufficient funds in the budget to continue their work in the next fiscal year.

The testimony of Dr. Moore to this committee this morning is a good example of my point. It was written in part by two Federal Governments. It is, in effect, the Government that is two-faced. As one Federal Government face, Dr. Moore will try to convince us that EPA now has an effective program in place, one that will work rapidly to reduce the problem. He will point with pride to the fact that deadlines were met under the act passed last year.

On the other hand, he tries to convince us not to appropriate funds for the program for the next fiscal year because the other face, of this two-faced government, thinks asbestos is strictly a local responsibility.

My colleague from New Jersey calls this disappointing. I think it's much worse than that. We have two Federal Governments addressing the asbestos-in-building problem. A Dr. Jekyll, who thinks that asbestos is a problem and that the Federal Government should have an effective program to reduce the asbestos hazard facing the Nation's school children and school personnel; and a Mr. Hyde, who has made every effort to prevent effective Federal action on the asbestos problem, so that killers like lung cancer and mesothelioma can continue to shorten the lives of children and workers.

And we have thousands of school districts and millions of parents and teachers and service workers wondering who, Dr. Jekyll or Mr. Hyde, will speak for the Federal Government tomorrow.

Mr. Chairman, that situation has to come to an end. I know that you and other members of the committee, most especially my colleagues Jim Abdnor and Pat Moynihan, and everybody who is here today have made heroic efforts to assert one Federal policy on this question. Your policy is in favor of an effective Federal role. We know that. I just want to say that I hope to be a more active partner in your efforts on this question in the future, and I look forward to better defining the one good face of the Federal Government at this hearing today.

Senator STAFFORD. Thank you, Senator Durenberger. Senator Baucus, do you have any statement?

Senator BAUCUS. No statement.

Senator STAFFORD. Senator Moynihan?

Senator MOYNIHAN. Thank you, Mr. Chairman. I would simply like to thank Senator Durenberger for his remarks, which are statements that clarify and define what the tasks of this committee is. We passed this law, and it's up to us to see that it is enforced and is followed. And there is indeed a profound disinclination to do so, if not in EPA then surely in the Office of Management and Budget. A law without enforcement is no law.

Senator **Stafford**. Thank you, Senator Moynihan. And now we'll get to our first witness. We're going to ask Dr. Henry Falk, who is unscheduled, to come to the witness table along with Dr. Jack Moore of EPA. We're going to begin with Dr. Falk.

Dr. Falk is from the Centers for Disease Control. I hope we've got the names in the right place. And gentlemen, we'll say to you and to all of the witnesses who may appear this morning that we have the usual time problems. We know how hard you worked to prepare to come to these meetings. We always feel apologetic in asking you to complete your testimony in 5 minutes, but we're asking you to do that. Where there is a prepared written statement, that will appear in the record so that the work you have prepared will be available in full to the members and the staff of the committee during deliberations.

Having said that once I won't repeat it, but I will be watching the clock. Dr. Falk, with that cautionary warning, you're on.

I'm told, Dr. Falk, that you do not have a prepared statement, so let me start by asking you two or three questions. Would you describe briefly the types of diseases that are known to be caused by exposure to asbestos, also, what is the relationship between the amount of exposure and instance of disease?

STATEMENT OF DR. HENRY FALK, CENTERS FOR DISEASE CONTROL

Dr. **Falk**. There are a number of diseases that are known to be related to asbestos. The three diseases that are most important, and are most well known, in relation to asbestos are asbestosis, which is a scarring disease of the lungs, and two types of cancer; lung cancer and mesothelioma. There are a number of other diseases which are also thought to be related, including other types of cancer, but which occur either less frequently or the evidence may not be quite as large.

Of those three diseases; asbestosis, lung cancer, and mesothelioma, the two that are particularly important in terms of environmental exposures, the issue this morning, are lung cancer and mesothelioma. Those are diseases which occur, by and large, 15, 20 or more years after initial exposure.

In line with most scientific thinking about the development of cancer, it is not thought that there is any threshold, a particular amount of asbestos, that is necessary to potentially cause a disease. And I think the best thinking is that there is a very direct relationship between the amount of exposure that one is exposed to and the development of the disease, in terms of a linear type of relationship.

I might also add that lung cancer and mesothelioma are types of cancer for which survival is quite poor, and particularly for mesothelioma. These are diseases with high fatality ratios.

Senator **Stafford**. We thank you for pronouncing the second type of cancer, which my colleague had a little trouble with, and I would have had a lot of trouble with had I had it in a statement of mine.

I understand you've done some reviews of asbestos studies for the American Academy of Pediatrics. Are children at greater risk than adults?

Dr. **Falk**. The evidence which is available, on which all the dose response relationships have been calculated and the risk assessments done, are by and large based on evidence from occupational studies and exposures of adults, and disease developing in later life.

There really isn't information in terms of dose response relationships on children. But there are a number of factors which lead us to great concern in terms of exposure to children. One factor is that children have a much greater life expectancy than adults. And if we're dealing with diseases which might occur 20, 30, 40, or more years later, exposure early in life clearly allows a much greater opportunity for these diseases to appear.

And particularly for mesothelioma there is concern that the development of the disease is related mathematically to the time since first exposure. So that allowing for the greater life expectancy, there's a greater cause for concern.

Second, children are, in schools and elsewhere, inquisitive. They get into things. If there is an opportunity for exposure to material that is friable, children are perhaps more likely than adults to play with the material, to have access to it, or have direct contact with it.

For material that has settled to the floor and which may possibly be kicked up with activity, children are often playing closer to the floor, they live closer to the floor, they are more active, and they may kick up more dust and increase exposure that way. Their breathing rate and volumes are different than adults, and scientifically there is a potential for greater exposure.

Finally I would say when I was a pediatric intern, we were fond of saying that children are not simply small adults. Children have growing lungs, there are potentially factors which may be involved with children that we don't know about based on occupational studies——

Senator **Stafford**. Doctor, you used the term friable in describing asbestos in some form. Would you, for the benefit of our audience and some of us, tell us what friable means as you use it?

Dr. **Falk**. As I use it I mean asbestos containing materials that may come loose or crumble or be released from surfaces such as ceilings.

Senator **Lautenberg**. That need not be touched, however. Once it's released, it travels through the air.

Dr. **Falk**. Once it's released it travels through the air. After a period of time it will settle down on surfaces, and may be rereleased again by activity; so that if it settles into carpets, activity on the carpet may rerelease it. And at times, if there is access to material which is maybe partially attached, children playing with that surface or poking at it or throwing a ball at it may release the material quicker than it might have come off by itself.

Senator **Stafford**. Doctor, considering some of the risk assessments and studies you've looked at, and without getting into technical details about individual studies, can you describe in general terms some of the underlying assumptions?

For example, do these assessments adequately describe risks from the kind of episodic exposures that are likely to occur when deteriorated asbestos in a building is disturbed?

Dr. **Falk**. In general, the purpose of a risk assessment is to relate a certain amount of exposure to a particular effect that may occur. One considers a relationship where different levels of exposure and different degrees of effect occur, and there would be a mathematical model which would describe that relationship.

In any particular situation one has to know the exposure in that particular situation, and then you figure out where on the curve you stand, and what the likely effects will be.

A critical questions is how well does the current air level in a building adequately describe the potential exposure. As the current air level is measured at a single point in time, it may or may not be related to different activity patterns and so on.

The limitations are twofold, at least the main ones. One is that there are potential episodic excursions of much higher exposure, which are not accounted for in the air level, e.g., if chunks of material come off, or if there are sudden increases related to activity patterns and so on. They are not accounted for often in the models which are based on a simple air level.

Perhaps more important is that in the long term, buildings, in terms of their maintenance and state of repair, inevitably tend toward greater deterioration; certainly, that will occur naturally. And there is a potential for further exposure going down the road which is not accounted for by, say, a current air level in a building.

So that from a preventive point of view, when looking at the problem as a whole, one is concerned not just with a single air level at a current time and what the risk would be related to that, but one is concerned about what will happen to the building, its potential uses, its potential deterioration, how much exposure will occur in the future, and how will that affect the total exposure.

So, I think that needs to be borne in mind when one is thinking about a dose response relationship to a particular air level.

Senator **Stafford**. Thank you, Doctor. We know you were not a scheduled witness, and we appreciate your being here to medically set the stage for us as we begin these hearings. Are there questions from colleagues?

Senator **Lautenberg**. I just have one, if I might, Mr. Chairman. I respect and appreciate the statement that Dr. Falk has made. I think what I hear on one hand is that though you can't point to a single incident, but if you use the analogy that if you're skating on thin ice that you can go through it anytime, enough exposure could occur that could be dangerous.

The case that I talked about earlier, about the fellow in Patterson, he had only worked a short while in the asbestos company, and there were many young people in the area who were working there at that time. The union found some years later that evidence of the exposure occurred.

Do you know who Dr. Selikoff is.

Dr. **Falk**. Yes.

Senator **Lautenberg**. It was in that period of time that we made these discoveries. But what could we do now? Should we have air monitoring devices in schools or buildings that represent a potential hazard. Computer rooms have instruments that measure humidity and temperature to make sure that our records are preserved. Wouldn't it be just as valuable to see that a young life is preserved or their health is preserved?

Dr. **Falk**. I think that one has to look at different problems differently. One possible approach is very careful monitoring and control of the situation, another approach is taking preventative action for the future. And I think in this particular situation, where one is dealing with fibers which once taken in, may be present for long periods of time, where one is thinking of large numbers of buildings where it may be very difficult to set up long-term maintenance——

Senator **Lautenberg**. I ought to ask first, I assume that the equipment is available. Am I correct in that?

Dr. **Falk**. I think others may speak more to that, but that would be, I think, a very complex kind of system to set up with constant monitoring, very expensive sampling. I think to do that on a constant basis would be very difficult and would require a huge number of samples for all the different buildings and schools that you're talking about.

Now, the potential exposures and effects may go on for many years. The life of these buildings is probably several generations, at least one or two generations. And I think it would be a very complex monitoring effort to set that up.

Second, as I said before, not all of the exposures will occur from the ambient levels. There may be acute excursions, children exposed directly to asbestos, and that might not be picked up even by a fairly sophisticated kind of system.

I think it would be a very complex approach to take, and I think it would be extremely difficult to administer that type of an approach. The general feeling about this problem from the very beginning has been one of a preventive approach and——

Senator **Lautenberg**. Remove the hazard.

Dr. **Falk**. Yes.

Senator **Lautenberg**. Or remove the potential hazard.

Dr. **Falk**. Right.

Senator **Lautenberg**. I thank you, Mr. Chairman.

Senator **Stafford**. Thank you very much, Senator Lautenberg. If there are no further questions——

Senator **Baucus**. Mr. Chairman?

Senator **Stafford**. Senator Baucus.

Senator **Baucus**. Doctor, at what level should asbestos in a building be removed or covered up?

Dr. **Falk**. As I was trying to say, it's very difficult to say that any particular air level is the level of concern—you could calculate a particular air level that, over a long period of time, might lead to a certain risk of cancer, with the attendant uncertainties in that calculation. But one wouldn't be certain that that level would obtain at all times, and one wouldn't be certain about excursions and so on.

I think for that reason, due to the sudden changes which might occur, the idea is not to choose a particular level.

Senator BAUCUS. That's air level. I'm talking about what level of asbestos, or percentage of asbestos, in the ceiling or covering or insulation, or whatever, is so high that it should be either removed or covered, whatever?

Dr. FALK. I don't think I could say an exact level, but I think many of the ceilings that were sprayed have very sizable percentages of asbestos——

Senator BAUCUS. I'm sorry?

Dr. FALK. Many of the ceilings that were sprayed have very sizeable percentages of asbestos content, and I don't think that I can——

Senator BAUCUS. What I'm trying to get at is apart from the cost consideration, apart from the regulatory considerations, apart from all of that, just from a medical point of view.

Dr. FALK. Let me try it this way. The percentage of asbestos is one factor that would enter into the total dose. The amount of the material that came off, the time period in which it occurred, the kind of activities, all would enter into what would be the total dose. You have to take into account several factors in addition to just the percentage of the material in the ceiling. The total dose would amount to—the total dose would be a summation of the percentage of asbestos in the material, the total amount of material that came off——

Senator BAUCUS. I understand. But you have enough experience with this to give us a little more precise idea as to what that level, that hazardous level, is?

Dr. FALK. I don't think I could tell you that at the moment.

Senator BAUCUS. I mean, there are legislators, there are school administrators, there are EPA officials that need to know to some degree the answer to that question.

Dr. FALK. I don't think I could say that precise level at the moment.

Senator BAUCUS. Thank you.

Senator STAFFORD. Are there further questions? If not, Doctor, our thanks and appreciation for your coming up here and painting the medical picture before we get to our other witnesses. We know you're busy and you have other duties to carry out. We'll understand if you leave. Thank you very much.

And now, Dr. Moore, we'll come to you. If you have an opening statement we'd be glad to have it in the record and we would appreciate your summarizing within 5 minutes, if you can.

Mr. MOORE. Senator, I don't intend to read my opening statement. I might highlight a few comments.

Senator STAFFORD. We'd appreciate that.

STATEMENT OF JOHN MOORE, ASSISTANT ADMINISTRATOR FOR PESTICIDES AND TOXIC SUBSTANCES, ENVIRONMENTAL PROTECTION AGENCY

Dr. MOORE. Might I take this opportunity to announce my colleague at the table here with me this morning, Mrs. Susan Vogt, who heads up our Asbestos Action Program within my immediate office. I might also, in view of Senator Durenberger's opening statement, introduce myself as Dr. Jekyll.

Senator, I would like just to state the goal of EPA as it relates to the presence of asbestos in buildings. Our goal is to minimize the inhalation of asbestos that is found in buildings, in whatever form it may have been put into that building.

Asbestos in buildings is primarily found in three places, two of which are of particular concern, I think, to today's discussions. It's been used for many generations or for many decades as insulation, as boiler wrap, for example, in a boiler room, or as insulation around pipes throughout buildings.

It was also used particularly during a period after the Second World War as a troweled on material, either for acoustical purposes, for insulation purposes, or for fire prevention purposes. And that might include troweled on ceilings, it might be in crawl spaces in ceilings, et cetera. And it's those two types of activities that I think are of particular concern as far as the potential for release and harm from inhalation.

Our approach has basically five elements. First, whether it be a school or any type of a building, that one inspect the building to see if indeed they happen to have a building in which asbestos is present.

Second, evaluate the condition of that material when it's present. Third, develop a plan to address the situation, which could include a variety of things; depending upon where the material was and obviously the state of the material at the time of the inspection. It could be a simple operations and maintenance activity, since the mere presence of asbestos does not connote a hazard. Or it could go down to an option to remove the material if it's in a deteriorating condition. We also think it's important to notify the occupants of such structures of the presence of asbestos and what's being done.

Fourth, we also think it's important that qualified people are those who are performing the asbestos abatement work. And then, finally, in those instances in which asbestos is removed, let's make sure that we dispose of it in a safe way, so we don't end up putting it in another location which could pose a risk at some future date.

Our asbestos in school rule, which was mentioned in a couple of the opening statements, primarily addresses the first point of the five points that I just articulated. It's designed to motivate school districts to look to see if asbestos is in their school buildings and to notify parents and employees.

We have also developed, for a number of years, a fair amount of technical information. We took a hard look last summer and early fall as to what were the best things that the agency could do as it relates to asbestos in buildings. We certainly felt that it was important to continue an enforcement or a compliance activity to see how well schools were going about inspecting for asbestos.

But it also became apparent to me and to a number of my colleagues in the Agency, that while we had a lot of technical information, something needed to be done to better distribute information down to the local level where the decisions have to be made. And I think the activities that we have taken in the last number of months have had that as a primary focus. That also was a thrust in the language of the Asbestos School Hazard Abatement Act as well.

And indeed, we have made an effort to try to get information out of Washington, into the States, and then from the States down into the local activities. A variety of things have happened in that regard. Whereas a year ago we had no State grants for contractor certification or for technical assistance, we will have twelve by the end of this fiscal year. I think we have seven awarded now.

I might just mention the general objective of those grants. It is to develop and implement a contractor certification program. We think that is key to making sure that when asbestos is removed it's done in a proper way, and we don't create a bigger hazard than we think we're preventing. Other purposes of these grants are to inform school maintenance supervisors of the appropriate ways to do things, and to provide information and training to both local health and education departments on proper abatement procedures. The mere presence of asbestos doesn't suggest that one should immediately embark upon a program to tear it out as soon as possible at all costs. Finally, these grants provide a technical assistance coordinator to all of those schools which request such technical services. This is getting down into the State level.

Senator Durenberger and Senator Abdnor mentioned that we have three technical information centers. They were funded in the last few months. We'd like to add a fourth. Again, the idea is to train decision makers in schools, train supervisory personnel in contracting firms that abate asbestos to make sure that when they get out there that material is going to be handled and addressed correctly.

If I were to project where the Agency's commitment is for the next 12 months or so, or maybe for the next several years, I would say it would be to further enhance and embellish those types of activities. I would hope that we could go from the 12 State grants we are awarding to see that doubled.

I would like to see some of these asbestos information centers train trainers, so that indeed when they go back to their locale, they in turn can impart the knowledge that they have gained to others.

To address asbestos in a building is not terribly, I don't think it's difficult if somebody takes the time to impart that knowledge to a person in a correct fashion. It doesn't take somebody with 20 years of education or experience to learn how to look for asbestos, how to assess asbestos, and to reach a proper decision. But that mode or kind of training is essential, and I think what we're trying to do is get that information out there.

And with that, I think I have summarized my statement. I'll be glad to answer any questions.

Senator STAFFORD. All right, doctor. You've done very well. Calvin Coolidge would be proud of you. I think we're going to go to some questions, and I would say to my colleagues that where possible we should submit questions in writing to the witnesses since we have three panels to go through after Dr. Moore. But we'll start in and see how we do on about 5 minutes per member for questioning.

Senator MOYNIHAN. Mr. Chairman?

Senator STAFFORD. Yes.

Senator Moynihan. I have Mr. Drew Lewis, who has called on me to discuss our acid rain matters with Canada at 11, and if I could be excused. I have a series of questions which I'd like to put to Dr. Moore, and thanking him for his testimony, and if I could just interrupt to say that, I'll leave them with you.

Senator Stafford. Anyway you'd like, Senator Moynihan. Knowing Drew Lewis, I recommend that you——

Senator Moynihan. Be on time.

Senator Stafford. Dr. Moore, I believe you estimate that about three-quarters of a million public and commercial buildings contain friable asbestos. Is EPA doing anything at all to require owners of these buildings to prevent or clean up their asbestos hazard?

Dr. Moore. Senator, we have no regulation that requires them to develop a plan to abate. One thing that we were cognizant of last fall, when deciding what needed to be done, was that all of this technical information, whether it be in contractor certification, whether it be revised guidance, et cetera, has a 100 percent payout for any type of construction, though it was originally targeted for schools.

Senator Stafford. Do private homes contain asbestos? And if your answer would be yes, how high a percentage of them? And are you doing anything to inform home owners about the presence of asbestos in their homes?

Dr. Moore. Asbestos is found in some homes. Several years ago the Agency, in concert with the Consumer Product Safety Commission, did put together a small brochure that was geared to the homeowner, telling them how to look and if they found it, what would be the appropriate thing to do.

Obviously some of the older homes, for example, that had a circulating hot water type heating system may have asbestos material in the insulation.

Some of the asbestos material around the furnaces and things of that sort may also be an asbestos sheet type of material.

Senator Stafford. All right. Thank you, doctor. I have several additional questions, but in the interest of time I'm going to submit them to you in writing for a response at your early convenience. And we'll follow the custom of this committee, since I have been on it, of recognizing Senators for questions in the order in which they arrived at the hearing.

My recollection is that Senator Durenberger followed me in.

Senator Durenberger. Thank you, Mr. Chairman. I also have about a half hour of questions, but I hate to submit all of them in writing. But first, Dr. Moore, Dr. Jekyll, has the EPA made any official quantitative or qualitative statement on the extent of the health hazard resulting from asbestos in building materials?

Do you have a written statement on the record someplace on either the quantitative or qualitative extent of the health hazard resulting from the use of asbestos in building materials?

Dr. Moore. No, Senator. I would say that in a variety of the documents that we put together, including the two surveys in which we quote 33,000 schools or three-quarters of a million buildings other than schools, that indeed there are statements in there. And there are statements in our guidance documents, especially the so-called Blue Book.

It certainly points out the degree of hazard. But as to whether or not we've tried to translate that into a quantification of what that hazard may be, I don't believe we have done it. I really wouldn't know how to do it and come up with an accurate projection.

Senator **Durenberger**. But we go through this everytime we get together, or something like this. Maybe you can tell me, with greater precision, the documentation that led up to the 1982 rulemaking, and just what it is you use to inform your specific decisions, for example, on the asbestos in schools grant program.

When we talked about EDB, at a hearing like this, you said you relied on certain risk assessment documents called position documents. When EPA makes decisions on air pollutants, we're talking about something called criteria documents. I think this way because in the Intelligence Committee we always do the same sort of thing.

The analysis that led up to the lead ban on gasoline had very extensive health impact assessments. What is the comparable analysis the Agency has done on asbestos, especially asbestos in buildings?

Dr. **Moore**. Senator, there are several documents that characterize and review the data as it relates to what degree of hazard or risk might be associated with those. One that we have relied heavily on in the Agency was developed by an expert panel for the Consumer Product Safety Commission several years ago.

More recently, last year in fact, we were in receipt of a report commissioned by the Agency with the National Academy of Sciences. The document pertains to the hazards associated with a nonoccupational exposure to asbestos. Those documents basically serve as our technical guidance of what the risk may be, and to some degree the projections of risk that might be associated with exposure to certain levels of asbestos wherever it may be.

Senator **Durenberger**. If you look at the whole range of issues that face your particular office—not EPA as a whole, but pesticides and other toxics—where does asbestos in the buildings rank as a health problem when you go to work in the morning?

Dr. **Moore**. High, very high.

Senator **Durenberger**. But compared to.

Dr. **Moore**. Well, I can't help but be persuaded by the fact that there are two materials in which there's no question of human toxicity. We don't need rats, we don't need any other type of experimentation from which we can then argue as to how you extrapolate them to mean. Asbestos, as Dr. Falk quickly summarized, is unfortunately a material that causes human disease. The other one I was going to mention was lead. We don't have to argue about whether there's human effects. There are human effects. They've been documented.

So, from my standpoint, I probably couldn't think of too many things, in the grand scheme of things, better than asbestos that——

Senator **Durenberger**. Can you think of one or two? Or otherwise I'll assume asbestos in buildings is No. 1 in your office.

Dr. **Moore**. I'll put it in the top five.

Senator **Durenberger**. What are the other four?

Dr. **Moore**. Oh, something that might be an acute toxic——

Senator **Lautenberg**. Smoking.

Dr. **Moore**. Yes, I'd put smoking there. It's outside of my purview, but I'd probably put smoking before asbestos. But put the combination of smoking and asbestos together and you've got a horrible circumstance.

Senator **Durenberger**. When you decided to use TSCA as your authority for inspection notification rule. you applied it only to schools. Do you want to tell us— and this is getting to what the chairman was exploring—why only schools?

Dr. **Moore**. That was before my time. But to my knowledge, the primary focus of why we selected schools was that, indeed, because of the known fact that children are at greater risk because they've got a greater lifetime in which to express it, that that was the appropriate place to start.

Senator **Durenberger**. I understand my 5 minutes are up.

Senator **Stafford**. I wondered if the Doctor was going to place alcoholic beverages in that five.

Dr. **Moore**. Yes. As a problem of disease burden in this country, yes. It's still smoking and I think alcohol.

Senator **Stafford**. That gives us promise for thought. Senator Abdnor?

Senator **Abdnor**. I have several questions, but I'll just ask one. It might be helpful to me when I go to my Appropriations Supplemental Committee. Has the $50 million appropriated thus far enabled you to meet the legitimate needs of the applicant school district?

Dr. **Moore**. Senator, as you know, we ended up with a hazard ranking scheme that was a rank of 1 through 6. We feel that anything that would fall under hazard ranking 1, 2, or 3 would have legitimately been eligible for funding this year had we had available funds.

The total sum of qualified applications that fell under those three categories was around $200 million. We obviously funded $45 million this year.

Senator **Abdnor**. And if we would have had $200 million you would have found a place to put it. That's what I needed to know. I have other questions, Mr. Chairman, I'm going to submit them in writing.

Mr. Chairman, last year you and I wrote to three Public Health Service officials asking that they provide us their comments on chrysotile asbestos. Additionally, earlier this year I corresponded with EPA, BIA, and Senator Andrews, chairman of the Select Committee on Indian Affairs concerning the status of asbestos in BIA school facilities.

Mr. Chairman, I ask unanimous consent that the correspondence together with the replies and supporting documents be included in the record at an appropriate place.

Senator **Stafford**. Without objection, we'll make that a part of the record. (See pp. 49–81.

Senator **Abdnor**. Thank you. I have a meeting I have to go to.

Senator **Stafford**. All right, Senator Lautenberg.

Senator **Lautenberg**. Thank you, Mr. Chairman. Dr. Moore, your testimony is very interesting. And as my colleagues indicate for themselves, I, too, have lots of things we'd like to talk about. Considering the chairman's reminder that we have a lot to do, I'll try to be brief, but I will submit questions which I'd appreciate your responses to from you or your staff.

Senator LAUTENBERG. I was interested in Senator Durenberger's searching for some kind of a litmus test. If we could use litmus paper, or if we could use an air monitoring device or something that gives us an indication of when that risk is present at its highest level, and what we could do immediately to prevent it, that would be ideal.

I respect your professional integrity, but both you and Dr. Falk kind of hedged, and I don't mean it in any jargon sense, just you can't put your finger on it exactly. Therefore, we have to continue the process of removal and the process of training.

As it happens, I have a regular home and a vacation home, both built before 1932, and each one has asbestos around the boiler area and the pipes, and we worry about it.

You said that you'd like to let everybody know you've got material available that describes what people ought to try and do.

How can we do that if we don't have enough trained contractors to do it? We did so in New Jersey, and looked for a long time to find a trained contractor, and also I wanted to be sure that the disposal was taken care of.

You've got three centers, right? Kansas, Atlanta, and Boston—with universities. I noticed your accent says that one of those is Boston.

Dr. MOORE. It wasn't Kansas.

Senator LAUTENBERG. I just wondered what influence that had with the opening of that center. But, Dr. Moore, of course I know that professionally you think that's a good place to be.

But if we're going to train people, if we're going to sound the alarm, if we're going to say hey, get this stuff out of your school buildings, your public buildings, your homes, if we're going to do that, where are we going to get the people to take it away? Who's going to be able to pay for it? Lots of the home owners can't afford the expense of going through that. There are lots of public buildings, that go beyond schools, we have courthouses and municipal buildings, and lots of them were built in that period of time when asbestos was freely used.

You've not asked for any funding for 1986. How are we going to get that done? The funds that were appropriated in 1985 were from an 1984 authorization. How are we going to conduct these programs?

Dr. MOORE. Senator, as I think you know, I think there's an honest difference of opinion between the administration and Congress; not in the need to identify and abate asbestos hazards and indeed to get people knowledgeable as to what the issues are associated with asbestos. The Administration does maintain that it is not necessarily a Federal role to come up with the funding, whether it be by loan or grant mechanism, to pay for the abatement in a school or in other circumstances. That doesn't mean it doesn't think abatement should take place when a risk is present.

Senator LAUTENBERG. OK. So then what you're saying, and with great respect for your professional skills and the job that you have to do, you're saying that this is a task that has to be done. Without defining where it gets done for the moment, we, as a Nation, concerned about the health of our citizens, ought to get on as rapidly as possible, alerting people, as you described the five points in your message here, and then remove it onto an appropriate disposal site.

If you had no financial limitation, no jurisdictional limitation, you, as a professional, would you say damn the torpedoes, full speed ahead, if that was your choice to make?

Dr. MOORE. Senator, I think if I had "unlimited funds" what I would do would be to clearly expand beyond the ten States that we're trying to get grants out to start contractor certification type of activities. I think we would increase the number of asbestos information centers across the country to try to get information available to the local level. And then even after somebody has gone to a 1-, 3-, or 5-day training course, as might be appropriate for their needs, there should be somebody available to reassure them the first few times they try to apply that knowledge that indeed they're making the right judgments, getting technical assistance close by. We've put in some 38 or 40 people into the regional offices of EPA to provide such technical assistance.

Senator LAUTENBERG. Dr. Falk, before said that he was looking for some identification. Is the problem serious? Does it bother you?

Dr. MOORE. I think the presence of asbestos in a building is a matter of concern. The degree of concern has to be determined by inspecting the asbestos.

Senator LAUTENBERG. What about in schools?

Dr. MOORE. Wherever.

Senator LAUTENBERG. But more important, the ingestion of air in larger quantities by children, with more rapid breathing, does that—just if we concentrate on schools—is that something that concerns you as the scientist or as the——

Dr. MOORE. If asbestos is in air, whether it be a child that's breathing it or whether it be an adult breathing it, there's risk associated with it. And the degree of that risk is directly proportional to the age of the person because of the length of time available to manifest the disease and the concentration of the material in the air.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator. Senator Baucus?

Senator BAUCUS. Thank you, Mr. Chairman. Dr. Moore, in your judgment, is there any safe level of asbestos?

Dr. MOORE. There probably is no safe level of asbestos. On the other hand, I do think there are probably levels low enough that the amount of risk that might be associated with it is almost de minimis.

Senator BAUCUS. Is this the policy of EPA that all asbestos should be removed, or that asbestos above a certain danger point should be removed?

Dr. MOORE. We don't think all asbestos should be removed just because it's present in a structure. What we do think is that if the material is in an area that's highly accessible or exposed, or indeed has already started to deteriorate so that it is going into the air, that indeed some type of action should be taken to address eliminate that.

Senator BAUCUS. So, you have some kind of a risk-assessment procedure in determining what the appropriate levels should be.

Dr. MOORE. Yes.

Senator BAUCUS. The second questions is, how well qualified are your people, EPA personnel, in discussing the problem with say, school personnel? You know the criticism that very often people are not very well qualified, and there's not really a good standards process, and nobody really knows what the appropriate level or standard should be.

What's your response to that?

Dr. MOORE. Senator, I think we have a number of well qualified people in the Agency. We always continue to buttress our judgments on technical matters, particularly with outside experts who review our material. For example, we revised our technical guidance book just a couple of months ago. That revision process involved a couple of dozen outside experts, which if I were to show the list to anybody, they would agree they truly represent some of the most knowledgeable and expert people in this country.

Senator BAUCUS. Well, the problem is that insufficient or imprecise standards makes it very difficult to know what's going on here.

Dr. MOORE. I agree.

Senator BAUCUS. I just encourage you to move more speedily to try to define those standards. I'm a little perplexed at the administration's view that this is a State problem. It seems to me that if the Federal Government says it's a Federal problem—there is, after all, a Federal statute here, several in fact—that it should also be somewhat of a Federal financial responsibility.

If the administration says it's a State problem, then why isn't this administration consistent and saying there should be no Federal statute? That is, States should set their own standards, their own statutes, and fund the problem themselves. Why isn't that more consistent?

Dr. MOORE. Well, I think in the past, particularly as it relates to school and education, that the Federal Government does not want to get heavily involved in some of these types of——

Senator BAUCUS. Well, it seems to me that if the Federal Government sets a Federal standard, and tells States that it must do something, then the Federal Government then has a responsibility to help pay for it. Doesn't that make sense?

Dr. MOORE. Yes, sir; the Federal Government's position to date has been to encourage anybody, whether it be a State or anybody else, to inspect buildings for the presence of asbestos. We also provide guidance as to how to make an interpretation of hazard when that material is present. There is no standard that demands that they do x, y, or z.

Senator BAUCUS. But the EPA is considering bringing civil actions against school districts.

Dr. MOORE. Who fail to inspect, yes, sir.

Senator BAUCUS. And the administration is also recommending no funds, as I understand it, for the School Asbestos Abatement Removal Program.

Dr. MOORE. That's correct. We have not requested additional funds for loans and grants to schools.

Senator BAUCUS. Then how can the administration say that schools not meeting Federal law, and at the same time say we're not going to help you take care of the problem, isn't that unfair?

Dr. MOORE. I wouldn't characterize it as unfair, Senator.

Senator BAUCUS. Well, I think it is.

Senator DURENBERGER. Unjust.

Senator BAUCUS. The same thing. Thank you.

Senator STAFFORD. Thank you, Senator Baucus. Just one question that occurred to me to clarify my understanding, and that is, the level of exposure in any given building, public or private, really depends on the type of asbestos product and the state it's in within that building, is that not true?

Dr. MOORE. Yes, sir.

Senator STAFFORD. So, that to assess the risk in a given building, you really require some inspection of that building. You can't make a blanket assessment of a series of school buildings, for example, without knowing what's inside of each building. Isn't that true?

Dr. MOORE. Yes, Senator; there's been some, I think, confusion on the part of people as to why we don't use an air monitoring standard, for example, as a means of saying if it's above a certain level do thus and so, if it's below it don't worry about it.

I think we would love to be able to do that if it was technically feasible. The reason we don't do that is that you might be sampling in room A, in the school building, when, in fact, it is the biology laboratory down at the other end of the building that has the friable asbestos in it where you would end up with asbestos in the air.

So, if you're sampling at the wrong place or at the wrong time you're going to get a false negative. That's what concerns us. If you sample and it's above a certain level, we certainly think there's a problem and you need to abate it. What we're concerned about is the reliance, or a sole reliance I should say, on an air sampling scheme in which you find it below a certain level, and then getting a false sense of security when, in fact, the problem does exist.

Senator STAFFORD. All right, thank you very much, Doctor. Senator Durenberger?

Senator DURENBERGER. Yes; just one short series of questions. John, when we talk about Jekyll and Hyde, and all that sort of thing, I guess we always do that in terms of what society is demanding of the Government role at one point in time. But I have been asked, and I guess I have agreed, to hold a similar hearing over in the Finance Committee on the issue of liability, and in large part, who is doing what is often determined by who has the resources to do what as well as the identification of the problem.

And it's sort of an interesting history of asbestos and asbestosis, and so forth. It seems to me it first got our attention in the 1930's when we had the big disaster in the shipyard construction. At that point the Government and the owner said don't blame us, go blame the manufacturers of asbestos. Now we seem to have a problem in that there aren't any of them left. They're all in chapter 11 or hiding some place in the system, and they want us to go back and say it's a workers comp situation or something.

I wonder if through the information you have on the school districts that you're working with, do you know, for example, which of those school districts are trying to shift the liability over onto manufacturers.

Do you have some idea of the dimension of the damages or the potential damages that lie out there against manufacturers? I keep hearing the figure $50 billion. Do you have some way of knowing, or have information available to you, that would confirm that one in anyway?

Dr. MOORE. I have no sense of what the numbers are. I have also heard similar numbers that are $50 billion or even higher. It's certainly within that range of numbers that I hear quoted.

Senator DURENBERGER. Are you also aware of the language in the law that encourages the Attorney General of the United States to file suit against manufacturers, to recover the cost to the Federal Government on this program?

Dr. MOORE. If my memory serves me correctly, the language in the School Hazard Abatement Act allows the Federal Government to file on behalf of the school district which has received money under the act. And indeed if it's successful in recovering any type of money, that the money would go to the Federal Government first in order to pay off the money that it had received under either a loan or a grant.

Senator DURENBERGER. Well, I think both the 1980 and the 1984 acts have language like this:

> The Attorney General shall, where appropriate, proceed in an expeditious manner to recover the amounts expended by the United States to carry out this title from the persons identified by the Attorney General as being liable for such costs.

That's basically what you're referring to?

Dr. MOORE. Correct.

Senator DURENBERGER. And in 1981—and I'm sure the chairman had a role in this—asked the Attorney General for a report on whether the Federal Government would likely be successful if it tried to recover its expenditure. The Attorney General, then William French Smith, sent up a report in November of that year that said the Government could, most properly, sue and probably sue successfully.

Are you aware of that report?

Dr. MOORE. Vaguely.

Senator DURENBERGER. You, yourself, haven't reviewed it?

Dr. MOORE. No.

Senator DURENBERGER. It seemed at the time that the Attorney General was adverse to filing a suit from the liable parties because that same Attorney General also opposed making any appropriations. But we have now made the appropriations.

Do you know whether the Attorney General is planning to sue anybody on behalf of any of these school districts?

Dr. MOORE. I'm not aware of any communication between us and the Department of Justice on that matter.

Senator DURENBERGER. One of the witnesses later on, on behalf of an organization called the Safe Building Alliance which represents the manufacturers of asbestos products, happens to represent in that context a company called the W.R. Grace Co., which is famous for finding fraud waste and abuse in the Government or at least its leader is.

To your knowledge, is the Attorney General's office aware that it has a responsibility to seek cost recovery for the Government under the law from the people like the W.R. Grace Co.?

Dr. MOORE. I couldn't presume to speak for the Justice Department.

Senator DURENBERGER. You don't know whether they do or they don't.

Dr. MOORE. No; I don't.

Senator DURENBERGER. OK, thank you.

Senator STAFFORD. Thank you, Senator Durenberger. Senator Lautenberg, did you have additional questions?

Senator LAUTENBERG. Just a few, Mr. Chairman, with your indulgence. Dr. Moore, we all heard testimony that declared that only trained contractors ought to be doing this work, that people who don't know what they're doing could make a bad situation even worse.

Do you know how many contractors have been aided in terms of understanding their assignment, or how many skilled contractors there are out there who can do this kind of work?

Dr. MOORE. No; I don't know the numbers. We've trained, in those pilot centers in the first few months of operation, about 200 people.

Senator LAUTENBERG. You've trained about 200. And that's since the spring of this year?

Dr. MOORE. In essence, yes, at the turn of the year.

Senator LAUTENBERG. OK. So, that we were essentially stymied, really, in our ability as a Nation to get this job done because we didn't have the people to do it. Now, how many more contractors might be trained over the next dozen months or so?

Dr. MOORE. I don't know. I would guess 1,000 or 2,000. It's in that range.

Senator LAUTENBERG. Is the demand greater than the supply.

Dr. MOORE. Yes, sir.

Senator LAUTENBERG. It is. So how do we check on the effectiveness of those trained? Is there anyway that you know whether contractor A, B, or C out of Boston is doing the job properly? You know we have a serious problem in the State of New Jersey in terms of contractor liability, and I assume that it's not unique to our State.

Dr. MOORE. Senator, the only way I know that one would follow through on that, outside of those schools which got money through the Asbestos School Hazard Abatement Act, would be through State enforcement. Some States do have contractor certification programs and enforcement, the State of Maryland being maybe the most notable in that regard.

Senator LAUTENBERG. Yes.

Dr. MOORE. New Jersey most recently also has started a program.

Senator LAUTENBERG. So, when we get into the debate about whether or not Federal funds or Federal responsibilities ought to be involved here, it starts to clarify pretty quickly. Because what we have is the national problem, the defense of the health of our children as well as our citizens generally, and who is better equipped to do that? Shall we wait for one State, a forward looking State like New Jersey, to develop its program and say OK, seeing as you've spent the money share the program with us in the south, the west, wherever, and let us know what you're doing; meanwhile we'll wait for you. That doesn't sound like a very intelligent way to handle the problem of this type.

Do you agree?

Dr. **Moore**. Senator, we've looked at some States who have been ahead of the Federal Government in some of these activities, and looked at their State certification as a model, and have indeed encouraged other States to look at it through some of these grants that we've put out.

And our hope is within a short period of time, based on their experience and maybe a little different circumstance in their State, to take the best of some of these and maybe come up with a model certification program.

Senator **Lautenberg**. Right. But you'll be the data base, you'll be the information source. It has to be Federal, it's got to be someplace that has the responsibility beyond State borders.

Mr. Chairman, I'll submit the rest of these in writing. Thank you.

Senator **Stafford**. All right. Thank you very much, Senator. And thank you, Dr. Moore, for being here. If you can remain for the next few minutes, we would appreciate it. But if you have pressing duties we'll understand if you have to leave.

Dr. **Moore**. Thank you, Senator.

Senator **Stafford**. And now we'll hear from a panel. The first panel will consist of two distinguished scientists; Dr. Donald Dewees, who is a professor of economics and of law at the University of Toronto in Toronto, Ontario, Canada, and formerly director of research, Royal Commission on Matters of Health and Safety arising from the use of asbestos in Ontario, and Dr. Max Eisenberg, director, Science and Environmental Health, Office of Environmental Programs, Maryland State Department of Health and Mental Hygene, Baltimore, MD.

Gentlemen, we welcome you here. You heard me apologize earlier for asking you to say it all in 5 minutes, but we especially have to do that. Your full statements, if we have them, will appear in the record. I'm sure Dr. Eisenberg would join me in allowing our distinguished visitor from across the border to go first.

So, Dr. Dewees, you're on.

STATEMENT OF DONALD DEWEES, PROFESSOR OF ECONOMICS, PROFESSOR OF LAW, UNIVERSITY OF TORONTO

Dr. **Dewees**. Thank you, Mr. Chairman. I am pleased to appear here to discuss the report of the Ontario Royal Commission on Asbestos as it relates, in particular, to problems of asbestos in buildings.

I should explain that a Royal Commission is a body of individuals appointed by a government to study a particular problem and to report to the Government. When the report is submitted the body is disbanded, so there is no longer a Royal Commission on Asbestos. The Government may act then or not act on the recommendations.

The Ontario Royal Commission was appointed in 1980, reported in 1984, and I served the the three distinguished academics, who were the commissioners, as director of research during that period.

I would first like to discuss the conclusions of that Royal Commission with respect to asbestos exposures in buildings and the risks that they cause, and then highlight a few of the recommendations that the Commission made for dealing with this asbestos.

First, with respect to the exposure of occupants in buildings, passive occupants like ourselves in this room, the Royal Commission concluded that most exposures in buildings containing friable asbestos containing insulation would be to 0.001 fibres per cubic centimeter. That's one one-thousandth of a fibre per cubic centimeter. As I'll explain in a moment, that is quite a low level.

The Commission went on to note some exceptions to that general conclusion. The exceptions, that is the cases where exposures might be greater than this very low level, are: number one, when the occupant is near work that disturbs asbestos containing friable material; number two, when the occupant is within the range of air ciculation of work that disturbs friable asbestos containing material, or number three, if a significant quantity of asbestos containing friable material has fallen from its location onto some surface in the building and is being disturbed. In those three circumstances exposures could be higher, perhaps substantially higher, than is covered by that general conclusion.

The Commission went on to evaluate the health risks from these exposures to asbestos, using models which have now been applied in a number of other studies subsequently and some previously. The Commission's conclusion could be expressed as follows; an exposure for 10 years, in a building where the airborn asbestos level was one one-thousandth of a fibre per cubic centimeter, would lead to a risk of mortality from asbestos disease of roughly 15 per million. That is, if a million people were exposed, by the time that entire population died of various causes, 15 of them would be expected to have died from asbestos related disease.

To put that risk in perspective, consider occupants of a building who drive a 10-mile round trip to that building everyday, and do this for 10 years. The risk of an automobile related fatality occurring during the 10 years of commuting is 50 times greater than the projected risk of dying at some time, decades later, of an asbestos related disease. And so, getting to and from work is far more risky than being in the building when the exposure level is of the magnitude that the Commission found. The Commission concluded that exposures of occupants in buildings did not require immediate action in most cases.

Turning to building workers, maintenance workers, demolition workers, and asbestos removal workers, exposures may be much higher because these people may be disturbing asbestos. Exposures could approach the historic levels that have caused the tragic legacy of asbestos that we're now seeing. And therefore, the Commission concluded that regulations were required, primarily to protect these workers who may be disturbing asbestos in buildings.

One implication of this conclusion, that asbestos removal workers are inevitably exposed to significant airborne fibre levels, even in the best operated removal work, is that you can't eliminate asbestos risks by removing asbestos. You reduce them in total if you do the job well, and you shift them from the occupants and the maintenance workers to the removal workers. But there is no way you can eliminate risk because we don't have a way of removing asbestos from a building without some exposure to those removal workers.

Let me go on to briefly summarize the recommendations, some of the recommendations that the Commission made to deal with this problem, which it saw, therefore, as primarily a problem of damaged insulation or protecting building workers.

With respect to when you must test for asbestos: If friable material is falling onto building surfaces and being disturbed, the Commission recommends requiring that the building owner have that material tested to see if it contains asbestos.

Senator LAUTENBERG. How do they identify it in the first place?

Dr. DEWEES. If friable material is falling——

Senator LAUTENBERG. Well, does someone have to observe or say hey, I saw this stuff falling down the hall, maybe it's asbestos or maybe——

Dr. DEWEES. That's right, somebody notices that something has fallen. That would trigger that request. And it could be building owner, occupant, maintenance worker, anybody.

Second, with respect to building inspection, when must you go searching through a building to find asbestos? That must be done prior to any work that might disturb asbestos. If you're going to do renovation, maintenance, or demolition, there is then a requirement on the building owner that the building be inspected to see whether asbestos containing material may be present. Suspect materials have to be tested, and there's a set of recommendations.

But what do you do if you find asbestos in those conditions? With respect to choosing among control alternatives: removal; encapsulation—that is, spraying a sealer on the material—or enclosing it, putting a structure around it, removal is always appropriate, but not necessary required. The Commission recommended against encapsulation in general because of problems that can be caused if you spray on material that may later fall apart and collapse. There are also some problems in removal. Enclosure is particularly appropriate for pipe and boiler insulation, where it's easy to wrap something around the material while it's in place.

With respect to demolition, the Commission recommended that friable asbestos insulation always be removed prior to building demolition. That essentially endorses the current practices in the United States and also in Canada.

Notice the implication of that recommendation. All the asbestos in buildings will have to be removed sooner or later. The question is not do you remove it, the question is when. If you wait until demolition, do you remove it now, do you remove it at some intermediate point when you're going to renovate and install sprinklers, or otherwise possibly disturb the asbestos?

Senator STAFFORD. Can you complete your summary now, Doctor? We've consumed 7 minutes.

Dr. DEWEES. Yes, thank you. In summary, the Ontario Royal Commission did not say that asbestos is not hazardous. They recognized what was termed an occupational health disaster at an asbestos manufacturing plant in Toronto. Rather, the Commission said that the low exposures of building occupants leads to very low risks and does not, therefore, warrant a universal program of either inspection or removal, but rather an appropriate control program would be one which identifies high risk situations, as spelled out in the Commission's recommendations, and deals with them specifically.

Thank you, Mr. Chairman.

Senator **Stafford**. Thank you very much, doctor. We really appreciate your coming down here from that very delightful city of Toronto to help us.

Dr. Eisenberg, we'd be happy to hear from you.

STATEMENT OF MAX EISENBERG, DIRECTOR, SCIENCE AND ENVIRONMENTAL HEALTH, OFFICE OF ENVIRONMENTAL PROGRAMS, MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Dr. **Eisenberg**. Good morning. Thank you very much, Mr. Chairman and members of the committee. There is an intense public awareness and concern in Maryland regarding asbestos issues, and I'd just like to share with you some thoughts and perhaps give you some insight into the various initiatives that we have undertaken in the asbestos area in Maryland.

But rather than go through the various programs that we do have in place, I'd just like to spend the few minutes, I do have, in the regulatory programs specifically because apparently that seems to be of significant concern and interest here today.

And I'm referring specifically to our licensing program for asbestos contractors, as well as the worker Certification Program for those who are employed in asbestos removal or abatement activities.

The Maryland Legislature, 1981 and 1982, enacted legislation which resulted in some regulations which became effective in 1983, July 1983 specifically. There are two basic regulations which are in effect now in Maryland. The first is a contractor licensing program with its accompanying training requirement for worker certification, and the second is a work practice regulation which basically spells out the appropriate procedures that one should employ when one is involved in asbestos abatement activities.

The first, the licensing program, basically requires a license for every business involved or any individual involved in friable asbestos removal or encapsulation. The license covers a number of key elements, such as a major worker protection, including a written respiratory protection program, physical examinations, the appropriate protective clothing and equipment, as well as an approved training program.

And just let me say a few words about that training program, because we feel it's a critical component. The Department of Health and Mental Hygiene, within the State of Maryland, is the responsible agency. We set minimum criteria for the training program. The Department itself does not conduct these programs, but rather approves appropriate training programs that are being conducted by a number of people.

In the approval we set minimum criteria that the course should contain, we also specify the content of the course, the appropriate instructor qualifications, we also specify the maximum size of the class of the course, which presently is 20 students per class. We also specify the appropriate student evaluations and testing prior to a worker being certified, and finally, before a course receives full approval, we actually sit in on every one of these courses in order to make sure that, in fact, the appropriate requirements are being met by that course.

After the initial training by a worker there is a requirement for an annual retraining as well. Obviously, the annual retraining doesn't have the same requirement as the initial training does.

The work practice portion of the regulation contains a number of key elements, which I would just like to highlight for you. The two principally are one setting up the job initially, and we feel it's critical that the job is set up properly—by that I mean the appropriate methods sealing off the area, the containment of the area in order to prevent any asbestos migration from the worksite—and then the appropriate cleanup procedures afterward, which including disposal, which includes the packaging and the appropriate labeling of the material, and then it's appropriate disposal in an approved landfull. We have approved a number of landfills within the State specifically for asbestos, with the appropriate requirements again for asbestos disposal—which are different than many of the other materials.

The enforcement provision of the regulations is critical. And just let me point out that we inspect every large project at least once during the course of that project within the State. Every new contractor, that is licensed, has to prenotify us of at least his first two projects within the State, and they, too, are inspected.

We have a computerized listing of all of our license holders, as well as all the certified workers, in order for us to track these inspections and at the same time so that our inspectors in the field can automatically check names and Social Security numbers of every worker on the job to assure himself that, in fact, he has received the appropriate training.

Just let me share with you a few of the statistics, because I know this came up as to how many contractors have been licensed and how many trained workers do you have out there. As far as the regulatory Asbestos Licensing and Certification Program, that has been in effect for the last 2 years in Maryland is concerned, at the present time we have approximately 200 licensed contractors. Twenty percent of these are out-of-State contractors. In other words, their base of operation is outside the State of Maryland.

The training courses that we have approved are 17 to this date. And those 17 training course have trained approximately 6,500 workers over the past 2 years. Out of that 6,500, approximately 4,200 are still active in the field. We've taken a number of enforcement actions—and I won't belabor that point—but the fact is, enforcement is a critical area. And I can't emphasize that enough.

Just let me share one other activity that we have undertaken, and this is a most recent one which was prompted by the passage of the Asbestos School Hazard Abatement Act of 1984. With the funding assistance of the Environmental Protection Agency we've prepared two model documents, which have been distributed to all the States and the appropriate school districts, as well as being the subject of three well attended workshops around the country for State and school officials.

The first document is the one that Dr. Moore referred to a little bit earlier, and that's the model guidelines for an asbestos abatement contractor licensing and certification program, which to a large extent is modeled on the one that we are working with in the State of Maryland.

The second is a model contract specification for all asbestos abatement projects. This is basically a bidding document. Although much attention has been given to the model licensing document, we feel that the model contract specification document is a very valuable tool.

In order to place whatever controls, whatever requirements, whatever work practice requirements, which are appropriate on any job, directly in the contract, it doesn't require any statutory authority, it doesn't require any State enacted legislation, it's something that can be basically implemented immediately.

Senator **Stafford**. Could you summarize here, doctor?

Dr. **Eisenberg**. Certainly. The only recommendation we have also made, along with the contract specification document, is that we often recommend that the building owner employ, quite distinctly from the contractor, an asbestos project manager to oversee the contract, who reports directly to him.

Mr. Chairman, I appreciate the opportunity to provide the committee with this statement. I'd be pleased to answer any questions.

Senator **Stafford**. Well, we're grateful to you, Doctor, for coming here and helping us. I am going to submit some questions in writing to each one of you, if you, at your convenience, would respond in writing to the committee.

Senator Durenberger?

Senator **Durenberger**. I'll submit mine.

Senator **Stafford**. Will do the same. Senator Lautenberg?

Senator **Lautenberg**. Yes; are you going to bypass any oral questions?

Senator **Stafford**. If you wish to ask some, go ahead.

Senator **Lautenberg**. Just one thing that I wanted to be sure that I understood. Dr. Dewees, I was struck when you said that when evidence of asbestos is in the air, that's what triggers the response. We used to do that with fires and smoke in our respective societies. We used to wait for someone to sniff it or feel the heat or something like that. We found out that wasn't good enough, that often people were dead before they could be sensitive enough to call the fire department. So, now we've developed smoke alarms and those kinds of things.

Is that a sufficient triggering mechanism in your view, to get the engines out on asbestos removal or asbestos treatment?

Dr. **Dewees**. Yes; I don't think the analogy with the fire situation is really appropriate. If you have a fire that's already begun, you have a short time before the building may be engulfed. When the first piece of asbestos falls from an insulated pipe or from a ceiling exposure is beginning. But the risk is cumulative and depends upon how long individuals are exposed to asbestos in the air.

The first date of exposure to a low level of asbestos is not going to create a risk that anybody could measure. And so, the principle on which the Commission operated in that respect was that when friable insulation was falling onto building surfaces, that was certainly a time to test the material.

Notice I said also that a situation of high risk was one in which material was damaged. And so, if you want to observe that, for example, exposed insulation on a ceiling was damaged, even if you didn't see it falling, that would be enough to trigger what we call the maintenance and custodial program which observes the asbestos, cleans it up, repairs that particular damaged section.

So, it's not that someone needs to be there when a chunk falls, that's only one of several things that could trigger action under the Commission's recommendations. So, I hope I didn't give the impression of being cavalier——

Senator **Lautenberg**. It is possible, isn't it, to have this stuff loosening up near an air ventilator, or something like that, and not having it visible to the eye.

Dr. **Dewees**. Well, the asbestos in the air is not going to be visible to the eye until you get exposures way above the levels we're talking about here.

Senator **Lautenberg**. We have it from brake linings and we have lots of asbestos——

Dr. **Dewees**. In this room we probably have a little bit.

Senator **Lautenberg**. Well, we're properly insulated, that's the difference. OK, I wish to thank you very much, each of you, for the excellent testimony.

Senator **Stafford**. Thank you very much, gentlemen. We're very grateful to you. We're going to turn now to a panel consisting of Mrs. LaVerne Grady, health and mental health chairman, New Jersey State Congress of Parents and Teachers, Teaneck, NJ. I think Senator Lautenberg is particularly glad she's here, as he had mentioned.

Linda Tarr-Whelan, director, government relations, National Education Association. We also understand that Mr. Edgar Kennedy, coordinator of operations, division of buildings and grounds, D.C. public schools, is here. And we will invite him to come to the witness table.

Ladies and gentlemen, we are now going to have to go with the 5 minutes somewhat more strictly than we have. And you're all familiar with the traffic signals of Washington, so you'll get five minutes on the green and then you'll start running the red light.

Mrs. Grady, do you care to go first?

Mrs. **Grady**. OK.

STATEMENT OF LAVERNE GRADY, HEALTH AND MENTAL HEALTH CHAIRMAN, NEW JERSEY STATE CONGRESS OF PARENTS AND TEACHERS

Mrs. **Grady**. Mr. Chairman and distinguished members of this committee, I am LaVerne Grady. I have been an active member of the National PTA for 26 years. I currently serve as New Jersey PTA chairman for health and mental health, and I am a member of the advisory board for legislation. I have also served as president of the Bergen County Council of PTA's from 1982 through 1984.

And I have served as a PTA unit president at an elementary school, junior high school, and the high school of Teaneck, NJ.

On behalf of the 5.6 million volunteer members of the National PTA, I appreciate this opportunity to present testimony before the committee regarding the problem of asbestos in our schools, and the question of whether the Asbestos School Hazard Abatement Act of 1984 and regulatory efforts of the Environmental Protection Agency are addressing the problem.

A January 1984 survey found that asbestos containing friable materials are present in nearly one-third of the U.S. schools—31,000 nationwide—with approximately 15 million children enrolled at those schools. And the cost of abatement of these hazards could be as high as $3 billion.

While many State and local school asbestos abatement programs have made a significant contribution toward full abatement, the requisite financial resources for full abatement simply are not available at the State and local levels.

Last year, thanks to the tireless efforts of Senator Abdnor and Senator Lautenberg and several other members of this committee, Congress approved the Asbestos School Hazard Abatement Act, and appropriated $50 million for fiscal year 1984. The ASHAA Program also authorized $50 million for fiscal year 1985, and $100 million for each of the five succeeding fiscal years. But no further appropriations have yet been proposed by the President or agreed to by Congress.

National PTA hopes that the members of this committee will urge the Senate conferees on the supplemental to accept a $5 million ASHAA provision, and will urge the Senate Appropriations Committee to appropriate the additional $100 million authorized for fiscal year 1986.

The National PTA commends EPA for its speedy and effective implementation of the ASHAA Program. EPA developed and initiated an application process in less than 4 months after enactment, and awarded loans and grants to LEA's less than 6 months later.

The only problems that have arisen in this first award year have been caused by circumstances clearly beyond EPA's control. As a result of the severe time constraints surrounding this year's application process, many school districts were unable to complete the applications—which were rather detailed and time consuming—before the deadline.

Further, the amount of funds available for ASHAA loans and grant awards was woefully inadequate to meet the needs of even those LEA's in the first—greatest—hazard category. But we hope that Congress will solve that problem by agreeing to further ASHAA appropriations for fiscal year 1985 and fiscal year 1986.

Senator STAFFORD. Mrs. Grady, you've consumed your 5 minutes.

Mrs. GRADY. My 5 minutes are up?

Senator STAFFORD. Yes.

Mrs. GRADY. Well, first I would like to thank all of you gentlemen for giving us the opportunity to present to you this testimony, and I personally appreciate this opportunity to come from the State of New Jersey to testify before this committee.

Senator STAFFORD. All of your statement will be in the record.

Mrs. GRADY. Thank you.

Senator STAFFORD. And we always feel apologetic that the time compressions on us force us to limit the speaking time for witnesses. We would like to have all the time in the world, but we just don't have it.

Mrs. GRADY. Goodness, my 5 minutes went fast. Senator Lautenberg. I always feel the same way, Mrs. Grady.

Senator STAFFORD. We'll do all the witnesses before we go to questions. Mrs. Whelan, we're ready to hear you.

STATEMENT OF LINDA TARR-WHELAN, DIRECTOR, GOVERNMENT RELATIONS, NATIONAL EDUCATION ASSOCIATION

Ms. TARR-WHELAN. Thank you very much, Mr. Chairman. My name is Linda Tarr-Whelan, and I'm the director of government relations for the National Education Association, which has 1.7 million members of the Nation's public school teachers, educational support personnel, and higher education faculty throughout the country.

We certainly appreciate the chance to testify today, and applaud the role of this committee in providing leadership on the question of asbestos in the schools. We appreciate the fact that you're taking an oversight look so quickly on this matter. And we would like to bring to you two major recommendations today, which we think are very important, to make the promise of ASHAA really a reality.

We feel very strongly, and join with others who have testified, that the Senate should continue its leadership in providing Federal assistance for the cleanup efforts by approving the full $100 million of the ASHAA appropriations for fiscal year 1986. Certainly the problem is enormous, and without that kind of resources, which is really just a beginning, I think we are making empty rhetorical statements.

Second, we would urge that you require EPA to promulgate regulations which would establish uniform Federal standards by which all schools and institutions of higher education would assess the degree of asbestos hazard and then be required to take measures to effectively and permanently abate these problems.

Mr. Chairman, members of the committee, we believe this is a partnership effort. This is not simply a request that the Federal Government take action. It is one for the education community, certainly the medical community, States and localities. The NEA has had a longstanding and strong concern about the issue. Most recently, in the last month or so, we have published a new publication on asbestos, which we have provided to you, and which we are using with our 12,000 local associations to survey what has been done about asbestos removal in the local school districts.

Senator STAFFORD. We'll incorporate that in the hearing record by reference.

Ms. TARR-WHELAN. Oh, thank you. When the results of that survey are completed I will submit them to this committee.

But even though I say this is a partnership effort, it's clear that without Federal Government leadership, we are not going to be able to take care of the problem. While there are various kinds of estimates of the amount of money that it will take, clearly they are in the billions of dollars, and even ln this appropriation year we are talking about $100 million.

We also are very concerned that the EPA has not requested funding itself, and are appreciative of the committee's efforts to see that an organization which talks about the need for technical assistance, the need for programs, also follows through with requesting the funds necessary to do that.

I'd like to speak, for just a moment, on the regulatory issue, because I think that that is particularly important. We discuss a number of other things in our statement, and I know that you and the committee staff will be looking at that. But with regard to the question of regulations, I was interested to hear Dr. Moore testify before I did.

The NEA and the EPA should really have the same kinds of interest in regulation. The only difference is we believe it's necessary for everyone. It is not a voluntary situation, but in fact a public health situation. And we would strongly urge that EPA be in a position—and I would feel that this committee is the best place to put it in that position—to formally have regulations which do the kinds of things that Dr. Moore talked about.

We would certainly include some areas that he did not mention, although I think he would probably agree. First we would say that all schools with hazardous asbestos must take appropriate abatement action within a certain period of time. Secondly, certified contractors should be used. Thirdly, building occupant safeguards must be taken care of while the asbestos is being removed. Fourth, procedures must exist for the disposal of the removed asbestos. And five, and we think very important, there must be periodic reinspection where asbestos is not permanently removed, but has been encapsulated or enclosed.

We believe, Mr. Chairman, that with formal mandatory regulations, and appropriate assistance from the Federal Government with regard to funding, we would actually be dealing with this issue in a substantive way.

We are very concerned that the research shows that State and local governments, even when their intent is the best, are actually not taking care of this problem in the way that we would like to see done.

The GAO study from this spring, which has been quoted before in the testimony, notes that district officials face problems in dealing with asbestos in their schools. I believe just one paragraph of that report, makes the conclusion that we're concerned about.

"School district officials believe that 90 percent of the actions taken were the most appropriate. State officials believe that 54 percent of the actions were the most appropriate, that 8 percent were not the most appropriate, and that they had no basis to judge 38 percent of the actions. EPA officials believe that 13 percent were not the most appropriate, and they had no basis to judge 59 percent." They did not find any of the actions to be the most appropriate in removing this hazard.

So, Mr. Chairman, and members of the committee, we look forward to working with you and continuing on getting some solutions for this problem.

Thank you.

Senator STAFFORD. Thank you very much, Linda. This brings my work in two fields together when we have an educational in front of this committee.

Mr. Kennedy, we'd be glad to hear from you if you have a statement you wish to make.

STATEMENT OF EDGAR KENNEDY, COORDINATOR FOR OPERATIONS, DIVISION OF BUILDINGS AND GROUNDS, WASHINGTON, D.C. PUBLIC SCHOOLS

Mr. KENNEDY. Thank you, Mr. Chairman. First of all I would like to thank you for affording me this opportunity to be here. From previous testimony it appears that the D.C. public schools, our local school district, has done things quite according to Hoyle.

I've listened to the previous expert testimony in the procedural kinds of matters, the workers safety, the concern about the students environment, user environment, and things of that nature, and it appears that we've done things quite according to Hoyle.

One of our concerns, although we are on the plus side of procedural matters, our concern is the kind of funding. It appears that the kind of money that we need to abate our problem have not been available to this point. I'm hoping that sometime in the very near future, of course in compliance with the kinds of rules that are set down, that some monies become available through either the Federal Government or some other funding source.

It appears that the concerns of the D.C. public schools are reflected in the concerns of the New Jersey State, and of course all other educational associations. And it's just very important that good attention be paid to the fact that funding is required.

I would like to say again that all of our workers do have the Maryland State certification, which was pronounced earlier by the doctor from Maryland.

In conclusion, I thank you again for affording us this opportunity. And we will work together toward the common goal of removing or abating the asbestos hazard.

Senator STAFFORD. I thank you very much, Mr. Kennedy, for your statement. There will be some questions in writing to each of you, if that's agreeable. And we're very happy that you were willing to come and help the committee in this important field. Thank you very much.

We have one more panel this morning; Mr. Wayne Tansil, director, Special Projects, the Pickering Firm, Memphis, TN, Ms. Geri Palast, legislative director, Service Employees International Union, AFL-CIO, and Mr. John Welch, president, Safe Buildings Alliance, also of Washington, DC.

We welcome you here. Why don't we allow Ms. Palast to go first, as the lady of the group?

STATEMENT OF GERI PALAST, LEGISLATIVE DIRECTOR, SERVICE EMPLOYEES INTERNATIONAL UNION, AFL-CIO, WASHINGTON, DC

Ms. PALAST. Thank you very much, Mr. Chairman. I will summarize my remarks and really focus on the issue of the impact of the asbestos hazard on service employees, and very strongly support the comments that have come before me regarding the need for full funding of the ASHAA program. And as you'll see in our testimony, we have brought up some issues that require more extensive oversight before the next cycle of applications.

We commend this committee and its work for getting ASHAA passed last year because it really is the first time, and gave the first money, to force EPA to take the steps necessary to begin a program. SEIU is currently in the U.S. District Court asking that a court order the EPA to initiate a rule making to require corrective action where hazard asbestos is present in schools, and to require appropriate action in hundreds of thousands of other public and commercial buildings that contain friable asbestos.

We have found that the highest officials of the EPA have internally concluded that rules are needed, but they have sidestepped this conclusion, and for some inexplicable reason claim that their program is working anyway and have refused to issue these rules, as you've heard today.

In internal documents that we have found in the discovery in our law suit, we have found some really surprising things in terms of the internal support for the program, as we say. EPA agrees with the Congress and SEUI that asbestos in schools and other buildings is a serious hazard requiring corrective action. EPA also agrees that schools and other public and commercial should inspect for friable asbestos, take appropriate action to abate the hazard, and periodically reinspect until all hazard is removed.

EPA does not dispute these steps should be taken, for indeed, they are spelled out in all their guidance documents. As EPA agrees, where action is taken that is inconsistent with this guidance, money will not only be wasted, but risk may actually be increased.

Our inquiry has revealed that much action to date has been improper and indeed may have made matters worse.

The best evidence available shows that existing programs have left large categories of risk and have created new ones.

First, an extraordinarily large number of schools have not complied with EPA's inspection rule. In particular it appears that there has been substantial neglect of the boiler room hazard. A January 1984 EPA contractor survey found that two-thirds of local education agencies were not in compliance with the EPA inspection rule. And EPA compliance monitors have continually found violation rates of 50 percent.

EPA's baseline estimates of the school population at risk, slightly over 30,000 come from a 1984 telephone survey. In verifying this survey, there was a visitation of 90 schools. In 25 schools they found that the schools had failed to report all friable asbestos; 20 of these cases found unreported materials were in the boiler room. As a contractor put it, this suggests that LEAs do not realize boiler rooms require inspection.

This finding of boiler room neglect has strongly—was strongly and independently confirmed by EPA's own field staff. And I just want to give you a couple of quotes from the New England region, we have a quote, "In many typical school situations, seriously damaged and deteriorating asbestos is not accessible to children, for it is 'only in boiler rooms.' This common misconception of hazard only to children is in part responsible for noncompliance. Schools do not feel a need to recognize friable asbestos that is not accessible to children. The result is potentially high exposures to some adult employees."

And the regional asbestos coordinator in the Rocky Mountain region went on to say that, "The pipes and boiler rooms at the start of the technical assistance programs were put on the back burner; this is coming home to haunt us." And these are memorable words, "This is a time bomb awaiting."

Our members work in the boiler rooms. We know that people who work in the boiler rooms are neglected. We know, as EPA knows, that the time bomb of boiler room asbestos will come back to haunt not only our members, but as friable materials filters throughout the schools, teachers, students, and other school employees are effected as well.

We also want to point out that there is little dispute that a large, but unknown, amount of abatement that has been undertaken has been done improperly and may have increased the risk. And we have documentation in our testimony to support that.

In light of the above, the greatest present shortcoming of ASHAA is not so much the limitation in Federal funds available, but the absence of any present assurance that schools who cannot obtain ASHAA funds will take required action. And if they do so, will take action that does not waste money and increase harm.

At present, as we have discussed earlier, there is no requirement that schools reinspect, no requirement that schools take action, that schools who have taken action, but may have done so improperly, reinspect, and no requirement that schools who have found hazard take action to abate it, and finally, that no requirement that schools who take action use appropriately certified experts in doing so.

Senator STAFFORD. Now, Ms. Palast, you are running a red light.

Ms. PALAST. All right. We just want to point out that the boiler room problem, which is a time bomb, is really only the tip of the iceberg, as people have pointed out. The public and commercial buildings require the same kind of attention. And that finally,—and I just want to give you one quote from someone in the boiler room.

We have a president from a local in Portland, OR, and this will remind us why we're doing all of this. "When I go to work each morning, I go into boiler room and turn on the fam. All we hear is we have asbestos in the ceilings, nobody realizes we have it in boilers and on the pipes. The pipe that goes to the heating ducts has asbestos in it. Everytime I turn it on, the asbestos particles go into the system, into the whole school, and then every child, teacher, and secretary, as well as custodians are exposed to the fibers."

Thank you very much for your attention.

Senator STAFFORD. Thank you very much.

Mr. Welch, we're going to take you next and save the pictures for last.

STATEMENT OF JOHN WELCH, PRESIDENT, SAFE BUILDINGS ALLIANCE

Mr. WELCH. Thank you very much, Mr. Chairman. I'll summarize my remarks. In the past year, it's fair to state that several events have more clearly crystalized the asbestos and buildings issue and focused attention on rational responses.

First, as an extension to Dr. Dewees' testimony, another distinguished report has reaffirmed scientific determinations of the Ontario Royal Commission, and the 1984 New Jersey Asbestos Policy Committee, that asbestos-containing materials in schools and other buildings rarely pose significant risks to building occupants. Let me hasten to add, that doesn't mean that you do nothing.

In late April, a report written for the British Government by distinguished Oxford University scientists, Sir Richard Doll and Prof. Julian Peto, characterized the risk from asbestos in buildings as of an extremely low order. Calculating that even a person exposed in such buildings for 40 hours a week, for 20 years, would face a lifetime risk of approximately one per 100,000, Doll and Peto note that such low risks, consistent with the Ontario Royal Commission findings, are generally considered to be negligible.

These expert conclusions underline the pressing need to develop, consistent with the testimony that nearly all parties have given today, regulations and guidelines for distinguishing those buildings where friable asbestos containing materials may present significant risks from those that do not. Such guidelines not only ensure selection of the most appropriate abatement options, but also maximize the usefulness of Federal assistance provided by the Asbestos School Hazard Abatement Act.

Without those definitive regulations, asbestos abatement efforts in schools alone, not to mention Government buildings or buildings in the public and private sector, could easily balloon into a multibillion dollar proposition.

As the SEIU witness has testified, as we agree, although significant exposures do not occur to building occupants, it's clear that maintenance and custodial personnel are a special population at risk and may require special worker protection rules, which we strongly support.

The collective payback on asbestos management programs and worker protection rules has been vastly underestimated by the Environmental Protection Agency. Those two regulatory approaches embody one of the underlying precepts of medicine, and that is, first do no harm. In contrast to removal, management programs have the clear potential to protect maintenance personnel and building occupants from unnecessary exposures. Asbestos material management is also very cost effective. It avoids the substantial and well defined risks of categorical removal. And in cases where removal is appropriate, and there will be cases where it is appropriate, it provides effective interim control.

The one area that we believe is most lacking in terms of the Environmental Protection Agency's attention is in taking a leadership role and defining air monitoring techniques for asbestos in buildings. We think that is an area where a portion of the Asbestos School Hazard Abatement Act funds should be focused.

That concludes my remarks.

Senator **Stafford**. All right, Mr. Welch. You still did have a couple of minutes. The timer here seems to be faulty and I've resorted to the old-fashioned clock. Mr. Tansil, now we'd be glad to hear from you.

STATEMENT OF WAYNE TANSIL, DIRECTOR, SPECIAL PROJECTS, THE PICKERING FIRM

Mr. **Tansil**. Thank you very much. Mr. Chairman, I appreciate this opportunity to address this committee. My name is Wayne Tansil, I'm from the Pickering Firm, Memphis, TN. My responsibilities include directing Pickering's asbestos abatement consulting activities. We're a 40-year-old Memphis based consulting A/E firm. We've provided asbestos identification and exposure assessment, asbestos management programs, abatement design and construction observation for well over 800 buildings nationwide, from Tennessee to Alaska.

We gained our national reputation in asbestos consulting because of the use of best available practice, stringent abatement specifications, and our construction observation to enforce those. Doing it right, as Senator Stafford said.

I'm going to provide one example here of some material that needs abatement immediately. In 1984 we were asked to develop costs for removal of asbestos in the fieldhouse of a major university. Sprayed on fireproofing on structural steel was exposed in storage areas and some usage areas throughout the building, a large building. (Slide 1, p. 43.) The material was very friable, it fell at the slightest touch. One particular area had had nets attached to the structural steel and had been used for baseball batting practice.

Asbestos had covered the floor. (Slide 2, p. 43.) It was one of the worst situations I have ever seen anywhere. As you come closer to the material you can see the amount of damage that's involved, the material down off of the steel beams, (Slide 3, p. 44.) you can see where somebody wrote his initials in it, and got himself a dose in the process. (Slide 4, p. 44)

There the material has fallen unaided to the point where it's standing on that piece of conduit, down at the bottom. (Slide 5, p. 45.) You see here material that's all over the floor in storage areas, for equipment and unused chairs and so forth. (Slides 6 and 7, pp. 45 and 46.)

That's the baseball batting practice area where the gentlemen stand to knock their balls around. (Slide 8, p. 46.) This is asbestos which is also fallen unaided down onto the air handling ductwork system. (Slide 9, p. 47.) As you can see, it's a very powerful system; it's holding that large garbage bag straight out, (Slide 10, p. 47.) and it distributes the asbestos throughout the entire fieldhouse when several thousand people are watching basketball games.

Some interested parties minimize the asbestos-in-buildings situation. They belittle the problem by using statistical comparisons. Statistics indicate, and I quote, "That you are 50 times more likely to die in 10 years of driving to and from a building, than from contracting an asbestos related disease from working in the building."

The problem with such comparisons is that they're exactly what many building owners want, an excuse to say, "there is no problem; we don't need to pay an expert to evaluate a situation that's less risky than driving to work." Gentlemen, we are not concerned with the typical or the median building. We are concerned with identifying and dealing with the building with serious problems, that presents an immediate hazard.

If such a building is like the one I described, the comparison is badly wrong. Working in the building could be considerably more hazardous than driving to it.

In addition, if a maintenance employee tilts a ceiling panel to look above a drop ceiling, and gets a face full of asbestos containing debris, he can inhale an instantaneous dose of asbestos fibers equal to years of exposure to the OSHA occupational exposure limit of two fibers per cubic centimeter.

There's a great deal of concern associated with inexperienced personnel locating and evaluating asbestos in buildings. We worked for a large school district in Kentucky, which had had a survey done by a supposedly experienced consulting firm. They took about 1,200 samples from 165 buildings. They became concerned at some point about the quality of the information they had, and we were asked to evaulate it. In a cursory walk through investigation, we found some 550 additional samples that should have been taken. Some represented entire areas of the building missed, some were insufficient samples taken to adequately confirm analysis, and some were materials missed.

It should be apparent from this discussion that locating asbestos materials is not as simple as some would like to think. Exposure assessment is equally complex, if not more so.

The actual abatement work itself is labor intensive and relatively straightforward. The safety and health precautions, worker and work area protection, and decontamination procedures, on the other hand, are complex and sophisticated.

It takes three elements to produce a good asbestos abatement project. First, a comprehensive, stringent set of documents. Second, firm, knowledgeable, preferably full time construction observation. And third, a trained, willing contractor work force. Without any one of the three, the project is headed for potential disaster.

Several organizations are developing standard guide specifications for asbestos abatement. In theory, a standard spec is a good tool. In practice, there is real danger that inexperienced, untrained architect/engineers will use the document as a complete product and produce a project full of problems.

In addition, the untrained A/E will not provide the level or quality of construction observation necessary. We are beginning to train and certify contractors. That's good. We must do the same for those who are writing the specifications for contractors; otherwise you have a contractor turned loose on a project without a set of documents to function as a guide for him, and the owner is left without documentation that the project was, in fact, done using "best available practice" technology.

Site-specific is the operative term. Every project is unique and has its own combination of parameters which must be dealt with. If the specification does not deal with them, individually and collectively, then the project has potential problems from the beginning.

The EPA Technical Assistance Program has been valuable in providing guidance for building owners in how to deal with asbestos in their buildings. The program and the guidance documents have grown and changed with the growth and evolution of the body of asbestos assessment and abatement knowledge.

The newest version of the document, yet unpublished, provides up-to-date parameters for owners to use in making judgments in assessment and abatement. I feel, however, that the draft version of the new guidance document, in its present form, may unintentionally lead the owner toward doing his own survey and acting as his own consultant, rather than providing him with a checklist to evaluate the performance of his professional A/E.

I'm sure that was not the intent of those in the Technical Assistance Program, and I feel that the emphasis can be shifted before publication.

Senator STAFFORD. Can you summarize here, Mr. Tansil?

Mr. TANSIL. Yes, sir; your timing coincided with my summary. What should be done? First, contractor training and certification nationwide, which is underway. Second, A/E training and certification nationwide, which is not even under conception, to the best of my knowledge, except for one State.

We also need some relief from insurance problems. Regular insurance companies are out of the market. Insurance is only available from the surplus lines, in limited quantities and at great expense. Building owners across the country should take the prudent action of asbestos identification and exposure assessment as a first step. They cannot logically determine what needs to be done in their facilities if they don't know what conditions exist.

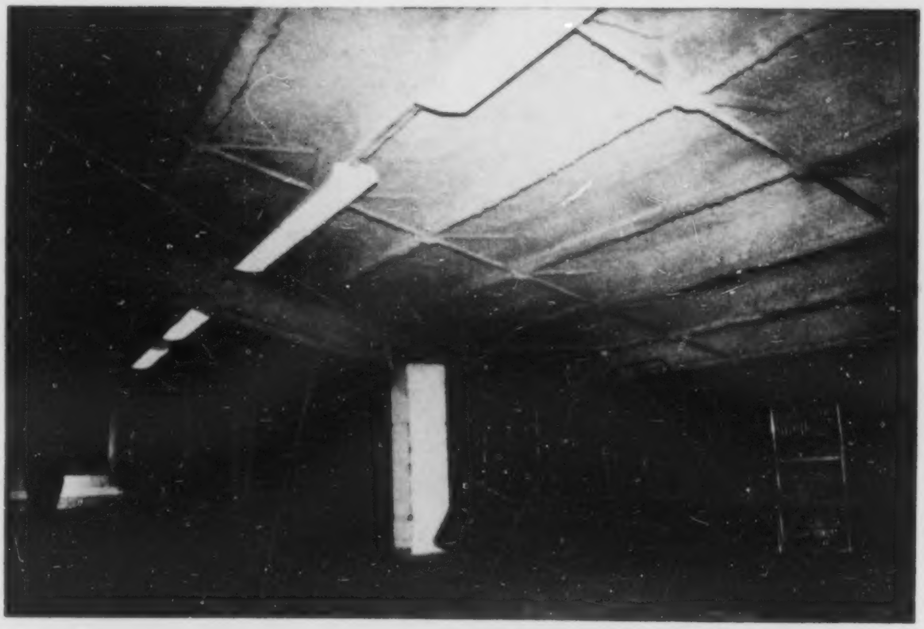
Thank you.

Senator STAFFORD. Thank you, Mr. Tansil. I do have one brief question for you, and that is in connection with the pictures you've just shown us. Is that sort of situation rare or have you encountered equally hazardous situations elsewhere fairly frequently?

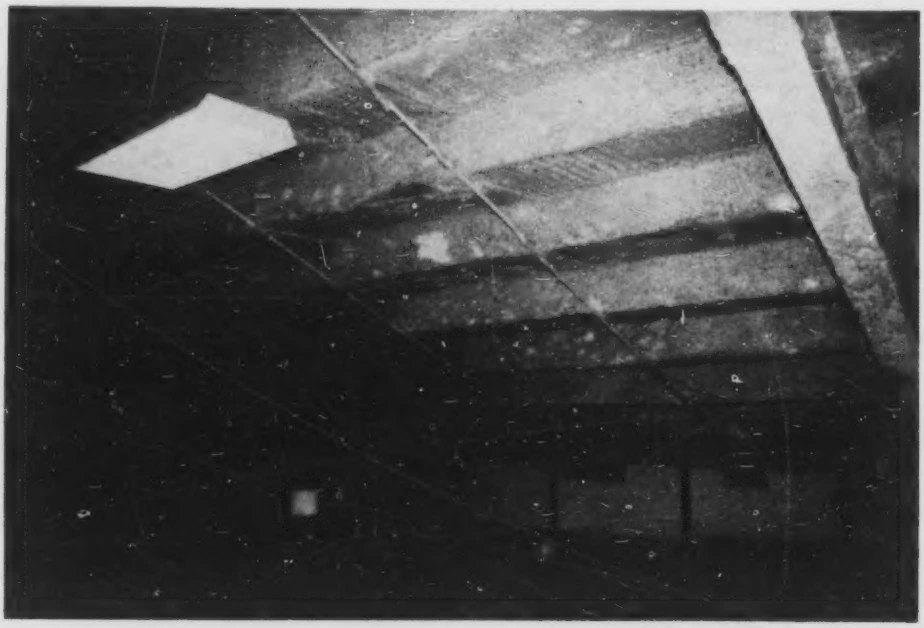
Mr. TANSIL. I don't encounter situations like that terribly frequently. However, we do encounter them on a regular basis. We've been consulted by one particular office management firm who got complaints from some attorneys in the building because they were finding dust on their desks in the morning.

The firm knows that the asbestos fireproofing on the deck above the ceiling panels has 50 percent asbestos in it. What they plan to do is to go above the ceiling at night and vacuum the panels, with the rationale that if the dust is gone, the attorneys will get off their back. They really have no basis, in fact, for taking any action without further evaluation to determine the seriousness and the cause of the problem.

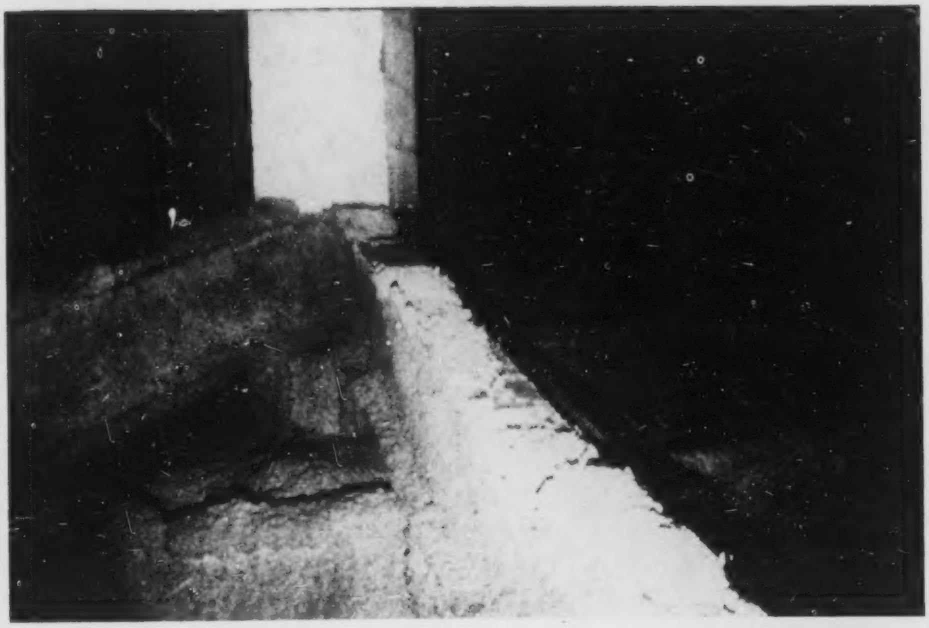
[Slides shown during Mr. Tansil's testimony follow:]



SLIDE 1. Sprayed-on asbestos fireproofing underneath bleachers of fieldhouse of major university.

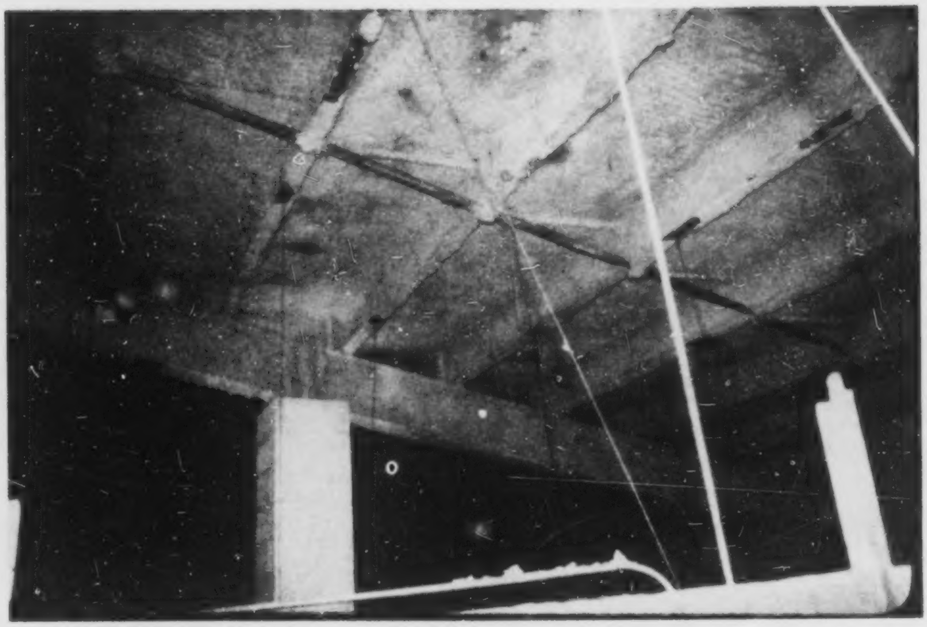


SLIDE 2. Deteriorating asbestos fireproofing fallen to floor of fieldhouse.



SLIDE 3. Close up view of area of deteriorated asbestos.

SLIDE 4. Vandalism resulting in release of asbestos fibers.



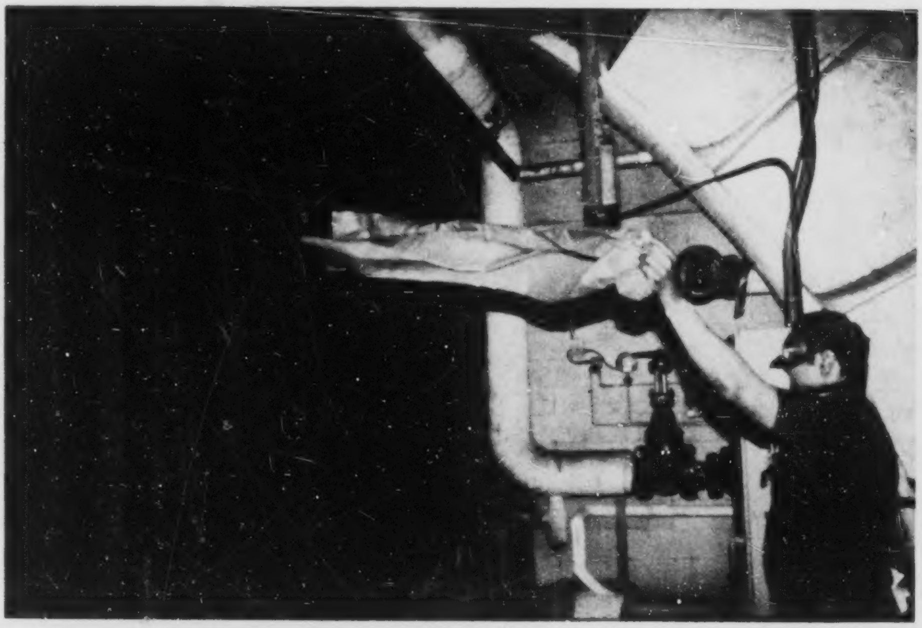
Slide 5. Asbestos fireproofing fallen from ceiling into conduit.

Slide 6. Asbestos fireproofing on floor of material storage area.

SLIDE 7. Asbestos fireproofing on floor of material storage area.

SLIDE 8. Asbestos on floor of area used by students for batting practice.

Slide 9. Asbestos fallen onto surface on air duct.



Slide 10. Plastic garbage bag demonstrates strength of air intake in abestos-contaminated area.

Senator Stafford. All right, thank you. Mr. Welch, your association represents companies that have made building products that do contain asbestos. Have you or your members made any effort to use sales records to trace those products? What steps have you taken to warn customers from those years about the danger from specific products?

Mr. WELCH. With regard to the sales records, I think that the answer to that question is no.

Senator STAFFORD. Could you speak up a little bit more?

Mr. WELCH. Sure. The answer to the question is no with regard to the the matter of sales records. These asbestos-containing products have not been manufactured by our companies for nearly a decade now. Insofar as the notification of schools or building owners that purchased those products at some point in time, I think that there is a well established body of scientific knowledge now that has made building owners aware of the potential hazards of those products.

On the other side of the coin, as we have heard today, there is a growing body of medical and scientific evidence that indicates clearly that in the majority of cases these products are not going to result in significant asbestos exposures, and therefore the risks are negligible. Again, let me hasten to add, that doesn't mean you do nothing, but that the risks are low and that the problem should be managed.

Senator STAFFORD. All right, thank you. I know the members who were here and had to leave will have some questions in writing that they will ask you to respond to, as will I. And with that, I'll thank you for the committee for coming and helping us as we consider what additional steps maybe we should take in this field.

And having said that, the committee will stand adjourned.

[Whereupon, the hearing was adjourned at 12:30 p.m.]

[Statements and other material submitted for the record follow:]

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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
WASHINGTON, D.C. 20510

July 15, 1984

Dr. Vernon Houk
Director
Center for Environmental Health
Centers for Disease Control
Atlanta, Georgia 30333

Dear Dr. Houk:

Mr. Malcolm Ross of the United States Geological Survey recently briefed staff of the Committee on Environment and Public Works concerning his views on the human health risk associated with exposure to inhaled chrysotile asbestos fibers. Mr. Ross alluded to a study of Canadian chrysotile miners that he asserts demonstrate that inhaled chrysotile asbestos does not present a significant health risk, especially when compared to other forms of asbestos such as crocidolite.

In reporting a bill appropriating funds for the Environmental Protection Agency, the House Committee on Appropriations adopted a similar position and criticized the Agency's asbestos regulatory program as it affects chrysotile asbestos. Subsequently, the Senate Committee on Appropriations took the opposite posture. Portions of the appropriations bill reports from both Committees are enclosed for your review.

In order to help eliminate confusion on this issue, we would like to request that you comment on the health effects of inhaled chrysotile asbestos.

Also, we would appreciate your views on the Canadian study used by Mr. Ross in his briefing and the conclusions that can be drawn from it.

Sincerely,

Jim Abdnor
James Abdnor
United States Senator

Robert T. Stafford
Chairman

RTS:ron

HOUSE REPORT ON H.R. 5713

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The committee generally supports EPA's increased emphasis on risk assessment in regulatory decisions, recognizing that some level of risk is inherent in virtually every substance and every activity. However, a marked departure from this balanced and well-reasoned approach to managing risk appears to be EPA's treatment of asbestos. In past decades, extremely high occupational exposures to asbestos have had catastrophic health consequences to exposed workers. These effects are well-known and have led the public to automatically associate asbestos with disease and death.

In fact asbestos is not a single substance, but a group of minerals with different physical and chemical characteristics and biological activities. Many researchers believe that "white" asbestos, which comprises 95 percent of all uses in this country, presents far less risk than other types. Moreover, there is no conclusive evidence of measurable adverse health effects produced by the inhalation of "white" asbestos at low nonoccupational exposures or from ingestion even at high concentrations.

Recently, the asbestos-in-schools program has received wide attention. However, EPA's handling of this problem has not encouraged rational or responsible risk management. Regulations require that parents be notified if "friable" asbestos is found, but EPA technical guidance is lacking on how school officials are to evaluate risks and select appropriate corrective measures. The potential for panic and overreaction is tremendous—leading to wasted resources and possibly higher asbestos exposures if complete removal is undertaken in schools where modest containment measures are appropriate. The committee urges EPA to provide more balanced and complete technical information to encourage more rational and less emotional responses to asbestos in schools.

The Agency's recent regulatory proposal for an immediate ban on asbestos in several major uses—with a complete phase-out over ten years—also perpetuates the "one fiber can kill" perception that is an anathema to rational decision-making on managing risks. This proposal to ban all forms of asbestos would impose a huge cost on society. Yet EPA has not seriously considered the approach being taken by Great Britain, Canada and the Common Market countries of differentiating among the types of asbestos and banning only those types believed to present higher health risks.

The committee believes it is essential for EPA to reconsider its approach to asbestos regulation and directs that before taking any further regulatory action restricting asbestos uses, the Agency do the following:

—Clearly define the minerals classified as asbestos;
—Fully evaluate the British, Canadian and European studies;
—Develop mineral-specific assessments of relative health risk;
—Evaluate epidemiological studies to identify the specific risks of "white" asbestos at low environmental exposures; and
—Conduct animal studies to determine the biological activity and health risks of asbestos substitutes.

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Calendar No. 967

98TH CONGRESS } SENATE { REPORT
2d Session } { 98-506

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT—INDEPENDENT AGENCIES APPROPRIATION BILL, 1985

JUNE 7 (legislative day, JUNE 6), 1984.—Ordered to be printed

* * * * * * * * * * * * *

The Committee strongly supports EPA's regulatory decisions regarding the uses of asbestos, particularly its increased emphasis on addressing the problem of asbestos in schools. Scientific studies begining in the 1930's have documented the link between exposure to asbestos and various types of cancer and other diseases. The House report is critical of EPA for allegedly failing to consider the approach being taken by Great Britain, Canada, and the Common Market countries. The data on which this approach rests suggests that the degree of risk resulting from exposure to chrysotile or white asbestos is not as great as that resulting from exposure to crocidolite or blue asbestos and amosite or brown asbestos. The Committee notes, however, that other studies, such as the 1983 Consumer Product Safety Commission (CPSC) report, have reached different conclusions. In fact, the CPSC report concluded that evidence for a significant difference among the important commercial asbestos varieties in their ability to cause lung cancer is weak. The report also shows that animal studies consistently document that all three forms of asbestos are equally potent in producing lung cancer and mesothelioma.

In addition, there is no known threshold level below which exposure to asbestos is considered safe. Moreover, evidence shows that children may stand an increased risk of developing disease from asbestos exposure due to the earlier period of life at which they are exposed. The question of providing financial assistance to school districts is currently being considered. Should such legislation pass, EPA's role in the asbestos-in-schools program would be expanded. In the interim, the Committee believes that EPA should continue its present approach to the asbestos problem. The Committee is advised that EPA considers its regulatory and enforcement activities concerning asbestos to be among its top 10 priorities. The Committee directs that EPA continue its efforts, and that neither further regulatory actions restricting asbestos uses, nor its program of having school officials identify asbestos hazards, should be delayed pending completion of further studies.

Finally, the Committee provided an additional $1,000,000 to undertake additional asbestos-in-schools inspections. It is expected that these additional funds could increase the number of inspections by about 1,000 over the proposed level.

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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

JUN 18 1984

The Honorable James Abdnor
United States Senate
Washington, D.C. 20510

Dear Senator Abdnor:

This is in response to your letter, also signed by Senator Robert T. Stafford, to Dr. Vernon N. Houk of my staff regarding his views on the risk to human health associated with exposures to inhaled chrysotile asbestos fibers and his views on the "Canadian Study used by Mr. Ross in his briefing and the conclusions that can be drawn from it."

On May 2, 1983, Dr. Houk, representing the Public Health Service of the Department of Health and Human Services, testified before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, U.S. House of Representatives. Dr. Houk stated, "It (chrysotile asbestos) is one of the types of asbestos that is fibrogenic; it does lead to malignancy in man; it has been studied in man in its pure form as well as its combined form, and there is very substantial literature on this subject." He further stated that its hazards have been established as medical fact and that there is no good basis for debate to the contrary. A discussion of the scientific literature which formed the basis for that testimony is enclosed, including the appropriate literature citations. The opinion expressed by Dr. Houk represents the position of the Centers for Disease Control.

The manner in which Mr. Ross uses data from the "Canadian Chrysotile Miners Study" is also discussed in the enclosure.

Thank you for your concern, and we hope this helps to eliminate the confusion on this issue. I am sending an identical letter to Senator Stafford.

Sincerely yours,

JPKoplan

for James O. Mason, M.D., Dr.P.H.
Assistant Surgeon General
Director

Enclosure

Statement on Chrysotile Asbestos and Disease
Prepared by the Centers for Disease Control
June 1984

Both animal and human epidemiological studies have shown that chrysotile asbestos is carcinogenic and fibrogenic. The scientific basis for this has been reviewed and supported in official publications of the World Health Organization's International Agency for Research on Cancer, 1976(1); the NIOSH Revised Recommended Standard for Occupational Exposure to Asbestos, 1976(2); and Asbestos, Volumes 1 and 2, Final Report of the Advisory Committee, Health and Safety Commission, United Kingdom, 1979(3). In addition to the data reviewed in these publications, new data have continued to provide more support for these conclusions.

Animal Studies by Wagner, et al. (1979) (4) have shown that a commercial grade 7 (predominately short) Canadian chrysotile can induce mesotheliomas when injected intrapleurally into rats and primary lung neoplasms when the animals were exposed by inhalation. This further supports Wagner's et al., 1973 (5) and 1974 (6) data which show that not only is chrysotile as potent as crocidolite and other amphiboles in inducing mesotheliomas after intrapleural injections, but also equally potent in inducing pulmonary neoplasms after inhalation exposures. In terms of degree of response related to the quantity of dust deposited and retained in the lungs of rats, Wagner et al., 1974 (6) found the chrysotile to be much more fibrogenic and carcinogenic than amphiboles. Stanton et al., (1977) (7) takes these findings even further and has shown that durable fibers with diameters less than 1.5 um and lengths greater than 8 um are carcinogenic in experimental animals regardless of their physiochemical properties.

Current epidemiologic data on worker populations exposed to chrysotile in addition to those mentioned in the three review publications include studies by Robinson et al (1979) (8); McDonald et al (1979) (9); Selikoff (1977) (10); Nicholson et al (1979) (11); Rubino et al (1979) (12); and Boutin et al (1979) (13); Kogan (1972) (14); and McDonald et al (1983) (15). Each of these studies shows a positive correlation between exposure to chrysotile asbestos and biological disease in humans including asbestosis, lung cancer, and mesothelioma of the pleura and peritoneum. Dement et al (1983) (16) has recently shown in a cohort mortality study of chrysotile asbestos textile workers between 1940 and 1975 that there is a dose response relationship for lung cancer and nonmalignant respiratory disease. Among 768 white males, statistically significant excess mortality was observed for lung cancer (SMR = 348) and nonmalignant respiratory disease (SMR = 263). These findings were consistent even at the lowest exposure category.

To address the conclusions of Dr. Malcolm Ross, a mineralogist with the United States Geological Survey, it should be pointed out that Dr. Ross's health analysis has been made using many statistical manipulations that are highly inappropriate. For example, he compares proportionate mortality among various cohorts without any consideration for age, exposure, or interval between exposure and death. Furthermore, Dr. Ross does not consider asbestosis death rates which are quite high in some of the cohorts which he compares. Dr. Ross further bases many of his assumptions of the studies of miners and millers of chrysotile in Quebec, Canada, primarily carried out by Dr. J.C. McDonald. Most recently, Dr. McDonald has stated in a paper presented at the Asbestos Symposium in Johannesburg in 1977 that of the cases of mesothelioma at Thetford mines, "There is therefore no good reason to doubt chrysotile exposures as the cause".(17).

Liddell et al (1977) (18) have further analyzed the mortality experience of the cohort of chrysotile absestos miners and millers previously studied by McDonald and found excesses of respiratory cancer, asbestosis and mesothelioma.

A recent study by Nicholson et al (1979) (11), examined the mortality of 544 Quebec mine and mill employees who corresponded closely in terms of exposure and periods of observation to cohorts of asbestos factory workers and insulation workers established in other studies. Among this cohort of 544 men with at least 20 years of employment in chrysotile mining and milling at Thetford Mines, Canada, 16% of the deaths were from lung cancer and 15% from asbestosis. The risk of death for asbestosis, at equal times from onset of exposure, was very similar in the miners and millers to that found in the factory workers and insulators. Lung cancer was similar among the miners and millers and in the factory workers but higher in the insulators.

Dr. Ross' superior in a letter to Governor Babbitt of Arizona stated that, "People involved in the mining or milling of chrysotile in Italy have an incidence of both lung cancer and mesothelioma that is lower than that of the control populations". Apparently they were not aware of Dr. Rubino's (12) most recent report on miners and millers in Italy which states that excess lung cancer was seen in the last quinquennium of observations and that mesothelioma has now also been observed in this population. It is not uncommon for persons who do not understand the concept of latency to make such a mistake since they frequently, as Dr. Ross has also done, do not consider the period of time from first exposure to disease manifestations. Asbestos induced diseases are diseases of long latent periods ranging anywhere from 15 to over 30 years from first exposure. To illustrate this point further, a paper presented by Wagoner et al (19) of workers in an asbestos manufacturing facility utilizing predominately chrysotile found excess asbestosis and lung cancer but found no mesothelioma in the population as of 1968. A continuing follow-up of this same population through 1976 has now reported 17 cases of mesothelioma death.(8)

The article by Thomas R. Fears (20) is often used as evidence of no association of disease with naturally occurring asbestos deposits. This study by the author's own admission suffers from a lack of sufficient information to draw such conclusions. For example, Mr. Fears has lumped all counties with asbestos deposits together with no assessment of exposure or length of residency of the population. While Mr. Fears concludes that his ". . . study provides no evidence that naturally occurring asbestos deposits provide a great risk to the general population of counties with asbestos deposits", the cavaets he lists in his study could have easily led him to conclude just the opposite that "This study provides no evidence that naturally occurring asbestos deposits do not increase the risk of disease in the general population of counties with asbestos deposits".

In summary, the findings of this literature on chrysotile asbestos are very similar to findings on other forms of asbestos. They conclusively demonstrate that chrysotile asbestos is a hazardous substance and poses a substantial health risk when inhaled.

1. International Agency for Research on Cancer, 1977: IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. Asbestos, Volume 14, International Agency for Research on Cancer, World Health Organization.

2. NIOSH, 1976: Revised Recommended Asbestos Standard, U.S. Dept. of Health, Education and Welfare, Public Health Service, CDC, Publication No. 77-169.

3. Advisory committee on Asbestos, 1979: Asbestos Volume 1 and Volume 2 final report of the Advisory Committee. Her Majesty's Stationary Office, Health and Safety Commission, United Kingdom.

4. Wagner JC et al, 1979: The Comparative Effects of Three Cyrysotiles by Injection and Inhalation in Rats. Presented at the Biological Effects of Mineral Fibres. IARC, Lyon, France, September 25-27, 1979.

5. Wagner JC et al, 1973: Mesotheliomata in rats after inoculation with asbestos and other materials. Brit. J. Cancer, 28, 175-185.

6. Wagoner JC et al, 1974: The effects of the inhalation of asbestos in rats. Brit. J. Cancer 29, 252-269.

7. Stauton MF et al, 1977: Carcinogenicity of fibrous glass: Pleural response in the rat in relation to fiber dimension. J. Natl. Cancer Institute, 58:587-603.

8. Robinson CF et al, 1979: Mortality Patterns, 1940-1975, Among Workers Employed in an Asbestos Textile Friction and Packing Products Manufacturing Facility. Dust and Disease. Ed: Lemen RA and Dement JM, Pathotox Publishers, Inc., Park Forest South, Illinois, 131.

9. McDonald JC et al, 1979: Mortality in Canadian Miners and Millers Exposed to Chrysotile. Health Hazards of Asbestos Exposure, Ed: Selikoff IJ and Hammond EC, Annals of NY Acad. Sci., 330, 1-9.

10. Selikoff IJ, 1977: Clinical Survey of Chrysotile Asbestos Miners and Millers in Baire Verte, Newfoundland - 1976. Report to the National Institute of Environmental Health Sciences, December 22, 1977, Research Triangle, North Carolina.

11. Nicholson WJ, 1979: Long Term Mortality Experience of Chrysotile Miners and millers in Thetford Mines, Quebec, Annals of the NY Acad. of Sciences. Ed: Selikoff IJ and Hammond EC, 330, 11-21.

12. Rubino GF et al, 1979: Mortality of Chrysotile Asbestos Workers at the Balangers Mine, Northern Italy. Br. J. Ind. Med., 36:187.

13. Boutin C et al, 1979: Radiological Features in Chrysotile Asbestos Mine and Mill Workers in Corsica. Presented at the Biological Effects of Mineral Fibres, Lyon, France, September 25-27, 1979.

14. Kogan FM, 1972: The Cancer mortality rate among workers of asbestos industry of the Urals. Gig. i. Sanit., 27, 29-32.

15. McDonald AD et al, 1983: Dust exposure and mortality in an American chrysotile textile plant. Br. J. Ind. Med., 40:361-367.

16. Dement JM et al, 1982: Estimates of Dose-Response for Respiratory Cancer Among Chrysotile Asbestos Textile Workers" Ann. Occup. Hyg. 26(1-4):869-887.

17. McDonald JC, 1978: Exposure Relationships and Malignant Mesothelioma. Proceedings of Asbestos Symposium, Johannesburg, South Africa, 3-7 October 1977. Ed: HW Glen. National Institute for Metallurgy, Randburg.

18. Liddell FDK et al, 1977: Methods of Cohort Analysis: Appraisal by Application to Asbestos Mining. J. Roy. Stat. Soc., Part A, 140:469.

19. Wagoner JK et al, 1973: Malignant and Non-Malignant Respiratory Disease Mortality Patterns Among Asbestos Production Workers. In: Congressional Record - Senate Proceedings and Debates of the 93rd Congress, First Session, 119, Part 6, Washington, D.C., U.S. Government Printing Office, S-4660-S-4662.

20. Fears TR, 1976: Cancer Mortality and Asbestos Deposits. Am. J. Epi., 104, No. 5, 523-526.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

June 20, 1984

The Honorable James Abdnor
United States Senate
Washington, D.C. 20510

Dear Senator Abdnor:

At your request I have reviewed the scientific literature pertaining to the health effects of chrysotile asbestos. In my opinion this review provides evidence in support of the toxicity of this fiber type. In animal studies chrysotile is as potent as the other types of asbestos. Epidemiological studies recently completed demonstrate chrysotile's ability to induce non-malignant respiratory disease and cancer in humans. The attached review supports these conclusions, which are consistent with the CDC position on chrysotile toxicity as expressed in Dr. Mason's June 18 letter to you.

Sincerely yours,

Richard A. Lemen

Richard A. Lemen
Director
Division of Standards Development
  and Technology Transfer
National Institute for Occupational
  Safety and Health

EVALUATION OF THE TOXICITY OF CHRYSOTILE ASBESTOS

In Vivo

Animal studies have adequately demonstrated that all commercial forms and several other types of asbestos can produce mesotheliomas and primary bronchogenic neoplasms in animals.

Although mesotheliomas were most readily produced by intrapleural injections, they were also produced following inhalation in studies conducted by Wagner and colleagues (Wagner et al., 1974). Additional studies by Wagner et al. (1979) demonstrated that a commercial grade, predominately short fiber Canadian chrysotile, used primarily for paint and plastic tile fillers, can induce mesotheliomas when injected intrapleurally into rats, and primary lung neoplasms when the animals are exposed by inhalation.

Chrysotile is not only as potent as crocidolite and other amphiboles in inducing mesotheliomas after intrapleural injections (Wagner et al., 1973) but also equally potent in inducing pulmonary neoplasms after inhalation exposures (Wagner et al., 1974). In terms of degree of response related to the quantity of dust deposited and retained in the lungs of rats, chrysotile appears to be much more fibrogenic and carcinogenic than the amphiboles (Wagner et al., 1974). After 24 months of exposure by inhalation, the concentration of dust in the lungs of rats exposed to Canadian chrysotile was only 1.8-2.2% of the total dust concentration in the lungs of animals exposed to amphiboles. Despite this large difference, the lung tumor incidences and degrees of pulmonary fibrosis were similar in all groups. The reasons for higher incidences of lung cancer and mesotheliomas in workers exposed to amphiboles may therefore be related to the greater fraction of respirable fibers found in amphiboles.

Research to this day has not been able to establish a fiber length below which a carcinogenic risk does not exist. This may be due to the unavailability of specifically sized fibers (Pott, 1979).

Epidemiological Studies

Epidemiological studies also demonstrate chrysotile's ability to induce non-malignant respiratory disease and cancer in humans. These studies are evaluated below:

Robinson et al. (1979) reported an additional 8 years of observation and 385 deaths among the cohort studied by Wagoner et al. (1973). Those workers manufactured asbestos textile, friction, and packing products. Chrysotile accounted for more than 99% of the total quantity of asbestos processed per year, except for 3 years during World War II. During those 3 years, amosite was selectively used because of U.S Navy specifications. However, during that period, amosite only accounted for approximately 5% of the total asbestos. The remainder, less than 1%, consisted of crocidolite and amosite which was used only in selected areas. Exposures to these two types may have had a role in the etiology of disease; however, due to the overwhelming exposure of the cohort to chrysotile, it is likely that the role was minor. Robinson et al. confirmed Wagoner et al.'s observations: a statistically significant excess of deaths due to bronchogenic cancer, suicide, heart disease, and nonmalignant respiratory disease including asbestosis. A statistically nonsignificant excess of digestive cancer and lymphoma was also detected.

Robinson et al. also described 17 mesotheliomas; whereas no mesotheliomas were detected in the Wagoner et al. study. This different observation is probably due to the fact that in the Wagoner study, observation of mortality ceased in 1967. The appearance of 17 mesothelioma in the Robinson study is consistent with a latency period for mesothelioma of 24 to 53 years. Analysis of the 17 mesothelioma cases indicated that 14 of the mesothelioma deaths occurred after the original study period. This observation confirms other findings that mesotheliomas are characterized by very long latency periods. Chovil and Stewart (1979) also reported latencies of 6 to 44 years, with a mean of 26.9 years.

Dement et al. (1982) have reported mortality among a cohort of asbestos textile workers exposed only to chrysotile. This cohort consisted of 768 white males employeed at least six months and followed between 1940 and 1975. There were 26 lung cancer deaths observed versus 7.47 expected for an Standard Mortality Ratio (SMR) of 348. Of the 191 deaths in this cohort, 15 (7.9%) were due to asbestosis or pulmonary fibrosis and one (0.5%) was due to a peritoneal mesothelioma. Linear relationships were demonstrated between cumulative fiber dose and the risk of mortality for lung cancer and noninfectous respiratory diseases. An SMR for lung cancer of 223 was observed for the lowest cumulative exposure category of less than 39 fibers/cc times years.

In a subsequent study of the same plant studied by Dement et al. (1982), McDonald et al. (1983) reported on the mortality experience of 2,543 men employed at least one month from 1938-1958. Eight hundred sixty three deaths were reported to have occurred before December 31, 1977, with one from mesothelioma. Twenty one deaths were ascribed to asbestosis and 66 to cancer of the lung. Compared with the number expected from South Carolina there was an excess of 30 deaths from respiratory cancer in men 20 or more years after first employment with an SMR of 199.5. The life-table analysis and "log-rank" (case control) analysis both showed a steep linear exposure-response that was some 50 fold greater at similar accumulated dust exposures than in Canadian chrysotile mining and milling. McDonald et al. (1983) attributed the greater risk of lung cancer in the textile workers than in the Canadian miners and millers as possibly related to major differences in the size distribution of fibers in the submicroscopic range which are not detected by the usual fiber or particle counting procedures.

Cigarette smoking habits did not differ between the textile workers and the Canadian miners and millers. Therefore, McDonald et al. (1983) concluded that the far greater risk of lung cancer in textile workers may be related to major differences in the size distribution of fibers in the submicroscopic range which are not detected by the usual fiber or particle counting procedures.

Weiss (1977) reported no unusual mortality experience over a 30-year period among a cohort of workers employed in a paper and millboard plant stated to be using only chrysotile. Weiss concluded that the results suggested a minimal hazard from chrysotile. This conclusion must be viewed in light of the limitations of the study. The study population was small (n=264), and only 66 workers had died at the time of analyses; two of the workers died of asbestosis. Moreover, the unusually low SMR for many causes of death in this study suggests the possibility of a selection bias greater than that usually seen when contrasting industrial populations with the general population.

McDonald et al. (1973, 1974) reported an increased risk of lung cancer among men employed in Quebec chrysotile mines and mills. The risk of lung cancer among the most heavily exposed workers was 5 times greater than that of the least exposed workers. Liddell et al. (1977) further analyzed the mortality experience of the cohort of chrysotile asbestos miners and millers studied by McDonald et al. and found excesses of respiratory cancer, asbestosis, and mesothelioma. As of 1977, these same Quebec chrysotile miners and millers had experienced nine confirmed and two suspected mesotheliomas (McDonald, 1978). The author concluded for the seven cases observed at Thetford mines that "There is therefore no good reason to doubt chrysotile exposures as the cause."

A recent study by Nicholson et al. (1979) examined the mortality of 544 Quebec chrysotile mine and mill employees. These workers were similar in terms of duration of exposure and period of observation to workers in cohorts derived from factories with mixed fiber exposures and insulation workers. Among this cohort of 544 men with at least 20 years of employment in chrysotile mining and milling at Thetford Mines, Canada, 16% of the deaths were from lung cancer and 15% from asbestosis. The risk of death from asbestosis in the miners and millers was very similar to that found in the factory workers and insulators. The lung cancer incidence was similar among the miners and millers and in the factory workers but higher in the insulators. One death from mesothelioma was reported in this cohort.

Selikoff (1977) surveyed 485 current employees of a chrysotile mine in Baire-Verte, Newfoundland, which had been in operation since 1963. Fifty employees (10%) had one or more radiographic abnormalities of the type commonly associated with asbestos exposure. Parenchymal abnormalities were most common; pleural changes were detected in only 3% of the individuals surveyed. For those individuals employed fewer than 5 years the prevalence of abnormalities was 5%; this prevalence increased with duration of employment. Abnormalities were found most often among those with the most intense exposures. This study was designed only to assess asbestos-related disease under more modern conditions than previous studies (Kogan et al., 1972; Rossiter et al., 1972); thus, assessment of the effects of short duration of exposure and long latency could not be made. The interpretation of these data is further complicated by the lack of a control population and environmental measurements. The study does demonstrate the prevalence of chest X-ray changes in an appreciable proportion of employed workers despite a short period since initial exposure.

Rubino et al. (1979) reported nine asbestosis deaths among chrysotile asbestos miners in northern Italy. An excess of lung cancer deaths (7 versus 3.4) was seen only during the last 5 years of observation, 1971-1975--the period of greatest latency. One mesothelioma was also reported during this period.

Studies of lung tissue obtained from workers with mesothelioma and from comparison groups with no asbestos exposure have yielded equivocal results regarding the relationship between chrysotile in lung tissue and mesothelioma. Jones et al. (1979) found no evidence to indict chrysotile; whereas Acheson and Gardner (1979) estimated a 6-fold relative risk of mesothelioma for persons with only chrysotile in lung tissue as compared to controls with no asbestos fibers in their lungs.

Boutin et al. (1979) studied abnormalities detected by chest X-rays obtained from chrysotile miners and millers in Corsica. They studied 166 ex-workers of the mines and mill that had been closed in 1965; a comparison was made to 156 workers with no asbestos exposure but with similar demographic variables. The X-rays were read according to the ILO U/C Classification system. Compared with controls, chrysotile workers had a prevalence of all parenchymal abnormalities 2.4 times greater. For those with a profusion of 1/2 or more, the prevalence ratio was approximately twice that of the comparison group. Pleural changes were twice as prevalent in chrysotile workers as in controls. Exposures among this cohort were reported to have been very high, with exposure concentrations ranging from 85 to 267 million particles per cubic foot (mppcf).

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Toxicology Program
P.O. Box 12233
Research Triangle Park, NC 27709

June 18, 1984

The Honorable Robert T. Stafford
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

The Honorable James Abdnor
United States Senate
Wasington, D.C. 20510

Dear Mr. Chairman and Senator Abdnor:

Thank you for your letter of June 15 concerning the potential carcinogenicity of chrysotile asbestos and specifically about information reported to you of studies that demonstrate that Canadian chrysotile miners do not show adverse health effects from chrysotile exposure.

The International Agency for Research on Cancer (IARC) Monograph on Asbestos (Volume 14, 1977) states that chrysotile asbestos causes lung cancer and mesothelioma in humans and lung cancer after inhalation in laboratory animals (IARC, 1982; summary enclosed). This is the view held by scientists knowledgeable about the biological effects of asbestos.

With respect to the studies of Canadian miners, it is true that some early reports suggested that chrysotile was less carcinogenic than other forms of asbestos. Later reports (Graham, S., et al., Cancer in Asbestos-Mining and Other Areas of Quebec, *Journal of the National Cancer Institute* 59: 1139-1145, 1977; and McDonald, J. C., et al., Dust Exposure and Mortality in Chrysotile Mining - 1910-1975, *British Journal of Industrial Medicine* 37: 11-24, 1980) showed that chrysotile causes lung cancer and there is a linear dose response relationship between chrysotile fiber concentration and lung cancer. Further, there has been an increased incidence of mesothelioma related to chrysotile exposure.

In addition, McDonald, J. C., et al. (*Cancer* 46: 1650-1656, 1980) have reported three cases of family contacts of chrysotile miners who developed mesothelioma.

These reports make it clear that chrysotile asbestos is carcinogenic to humans and should be considered hazardous. If you need further information, I shall be glad to assist you.

Sincerely yours,

D P. Rall

David P. Rall, M.D., Ph.D.
Director

Enclosure

WORLD HEALTH ORGANIZATION

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IARC MONOGRAPHS
ON THE
EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO HUMANS

Chemicals, Industrial Processes and
Industries Associated with Cancer
in Humans
IARC Monographs, Volumes 1 to 29

SUPPLEMENT 4

Report of an IARC *ad hoc* Working Group
which met in Lyon, 8-12 February 1982
to advise the Director, IARC,
on chemicals, industrial processes and industries
that are carcinogenic for humans

October 1982

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ASBESTOS (Group 1)*

A. Evidence for carcinogenicity to humans (*sufficient*)

Occupational exposure to chrysotile, amosite, anthophyllite and mixtures containing crocidolite has resulted in a high incidence of lung cancer. A predominantly tremolitic material mixed with anthophyllite and small amounts of chrysotile also caused an increased incidence of lung cancer. Pleural and peritoneal mesotheliomas have been observed after occupational exposure to crocidolite, amosite and chrysotile asbestos. Gastrointestinal cancers occurred in increased incidence in groups exposed occupationally to amosite, chrysotile or mixed fibres containing crocidolite. An excess of cancer of the larynx was also observed in exposed workers. Mesotheliomas have occurred in individuals living in the neighbourhood of asbestos factories and crocidolite mines, and in people living with asbestos workers. Cigarette smoking and occupational exposure to asbestos fibres increase lung cancer incidence independently; when they occur together, they act multiplicatively[1].

B. Evidence for carcinogenicity to animals (*sufficient*)

All types of commercial asbestos fibre that have been tested are carcinogenic to mice, rats, hamsters and rabbits, producing mesotheliomas and lung carcinomas after inhalation exposure and after administration intrapleurally, intratracheally or intraperitoneally[1].

C. Evidence for activity in short-term tests (*inadequate*)

Asbestos was not mutagenic in *Salmonella typhimurium* or *Escherichia coli*[2]. It has been claimed to be weakly mutagenic in Chinese hamster cells[3], but negative results in rat epithelial cells were published recently[4]. It has been reported that asbestos produces chromosomal anomalies in mammalian cells in culture[5,6], but this may be secondary to toxic damage. No increase in chromosomal anomalies was seen in cultured human cells treated with asbestos[7]. Sister chromatid exchanges were not increased in treated Chinese hamster cells[8]. No data on humans were available.

	DNA damage	Mutation	Chromosomal anomalies	Other
Prokaryotes		-		
Fungi/Green plants				
Insects				
Mammalian cells *(in vitro)*		-	?	
Mammals *(in vivo)*				
Humans *(in vivo)*				

---

* Categorized as Group 1 by the earlier Working Group, and data on humans and on animals not reevaluated by the present Group.

References

[1] IARC Monographs, *Suppl. 1*, 23, 1979

[2] Chamberlain, M. & Tarmy, E.M. (1977) Asbestos and glass fibres in bacterial mutation tests. *Mutat. Res.*, *43*, 159-164

[3] Huang, S.L. (1979) Amosite, chrysotile and crocidolite asbestos are mutagenic in Chinese hamster lung cells. *Mutat. Res.*, *68*, 265-274

[4] Reiss, B., Solomon, S., Tong, C., Levenstein, M., Rosenberg, S.H. & Williams, G.M. (1982) Absence of mutagenic activity of three forms of asbestos in liver epithelial cells. *Environ. Res.*, *27* (in press)

[5] Huang, S.L., Saggioro, D., Michelmann, H. & Malling, H.V. (1978) Genetic effects of crocidolite asbestos in Chinese hamster lung cells. *Mutat. Res.*, *57*, 225-232

[6] Sincock, A. & Seabright, M. (1975) Induction of chromosome changes in Chinese hamster cells by exposure to asbestos fibres. *Nature*, *257*, 56-58

[7] Sincock, A.M., Delhanty, J.D.A. & Casey, G. (1982) A comparison of the cytogenetic response to asbestos and glass fibre in Chinese hamster and human cell lines. Demonstration of growth inhibition in primary human fibroblasts. *Mutat. Res.*, *101*, 257-268

[8] Price-Jones, M.J., Gubbings, G. & Chamberlain, M. (1980) The genetic effects of crocidolite asbestos; comparison of chromosome abnormalities and sister-chromatid exchanges. *Mutat. Res.*, *79*, 331-336

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United States Senate
WASHINGTON, D.C. 20510

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Trade, Productivity, Econ Growth

December 3, 1984

The Honorable Mark Andrews
Chairman
Select Committee on Indian Affairs
United States Senate
Washington, D.C. 20510

Dear Mark:

In light of your role in securing both passage of the Asbestos School Hazard Abatement Act of 1984 (Title V of P.L. 98-377) and funding through the FY84 second general supplemental appropriations measure (P.L. 98-396), I wish to bring to your attention a situation at a BIA contract school in South Dakota.

Recently, I was contacted by a member of the Eagle Butte School Board relative to the possible presence of friable asbestos in the school gymnasium, which is located in a BIA building. Having conversed with both BIA and EPA staff in an effort to clarify the situation at Eagle Butte, my staff was told that although BIA conducted a comprehensive inspection of BIA schools in 1979, BIA contract school facilities were not inspected. (Enclosed please find a recent press release concerning my efforts relative to Eagle Butte and other schools which may be similarly affected, in South Dakota and other states in Region VIII.)

I understand that in 1983, investigative staff of the House Appropriations Committee prepared a report on the extent to which BIA contract school facilities may be affected by hazardous asbestos. Although I have not yet obtained a copy of the report, I am advised that the investigative staff found a significant number of these school facilities contain friable asbestos -- at levels in excess of OSHA standards.

The legislation we sponsored during the last session is intended to address such problems in BIA, as well as locally owned, school buildings. I believe it would be useful to look into this issue further, to ensure the health and safety of the children who attend these schools. In the event you agree that this matter warrants a hearing before your committee, I would like the opportunity to testify.

Mark, your consideration of my request will be appreciated greatly. If you have any questions concerning this issue, please contact me or have your staff contact Barbara Magnuson of my staff, at 4-2321.

With warm regards,

Sincerely,

JAMES ABDNOR
United States Senator

JA/bam

Enclosure

JAMES ABDNOR
South Dakota

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Toll Free 1-800-952-0018

United States Senate
WASHINGTON, DC 20510

Committees
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Chairman—Agriculture and Trans.
Trade, Productivity, Econ. Growth

February 13, 1985

The Honorable Mark Andrews
Chairman
Select Committee on Indian Affairs
United States Senate
Washington, D.C. 20510

Dear Mark:

On December 3, 1984, I wrote to you, outlining my concerns with respect to the possible presence of friable asbestos in BIA contract school facilities. Since then, I have learned that this problem is not limited to merely one or two BIA school facilities. Potentially hazardous asbestos has been identified in at least several or more BIA contract schools in my state.

Enclosed are copies of my letters to Mr. John W. Fritz, Acting Assistant Secretary for Indian Affairs, and Mr. Lee M. Thomas, Administrator of the Environmental Protection Agency (EPA), expressing my concerns in greater detail. Also enclosed is a copy of a recent article which appeared in the Rapid City Journal, entitled "Asbestos Study Not Finished Due to Foul-Up.'"

Please note that the deadline for submitting applications to EPA for asbestos abatement assistance is March 1. Thus, it is essential that we prod BIA to move forward quickly to fulfill its responsibilities as mandated by the Asbestos School Hazard Abatement Act of 1984.

I look forward to continuing to work with you to promote efforts to rid our nation's schools of health-threatening asbestos.

With best wishes,

Sincerely,

JAMES ABDNOR
United States Senator

JA/bam

Enclosures

Tuesday, February 5, 1985

theRapidCityJournal

Asbestos study not finished due to 'foul-up'

Adrian Louis
Staff Correspondent

PINE RIDGE — A study to determine the amount of asbestos in Pine Ridge High School hasn't been completed because of a "bureacratic foul-up" in the Bureau of Indian Affairs.

Asbestos samples taken from the walls and ceilings of the school Jan. 9 haven't been analyzed because a purchase order had not been filed for the required tests, Jerry Jaeger, area BIA director in Aberdeen, said Monday.

The samples were sent to the BIA's safety office in Albuquerque, N.M.

During a tour of the school, Jaeger said he'd found out only Monday morning that the test results were incomplete.

"We'll get them before the end of the week if we have to go down to Albuquerque and get them ourselves," he said. "I'm as dismayed as anyone."

Asbestos has been linked to cancer and lung disease and was used for many years as insulation.

School and BIA officials from Pine Ridge, Aberdeen, Albuquerque and Washington, D.C. toured the school Monday. The tour focused on structural weaknesses in the building.

Inspectors have said that the 40-year-old, two-story school is in very poor condition and is overcrowded. In 1950, asbestos was found in insulation and ceiling tiles in the building. Nothing has been done to remove or encapsulate it.

"If the asbestos is only on the heating pipes and steam pipes, we are looking at replacing the heating system," Jaeger said. "If the asbestos is in the walls and ceilings, then we'll need a totally new alternative immediately."

Jaeger and school officials agreed that test results are needed before any decision can be reached. He said he would ask for emergency funding if the heating system must be replaced.

Ken Fredericks, BIA superintendent in Pine Ridge, said if the contamination proved extensive, the school would relocate into modular classrooms. "We hope that today's findings will turn the wheels back there in Washington," he said.

The delay in getting the samples from the school tested for asbestos was a "bureaucratic foul-up," Fredericks said.

The group visited a classroom in the basement of the high school, where exposed sections of insulation around a heating pipe hung over the heads of students sitting in class. Some expressed amazement at seeing what they believed was exposed asbestos.

The Oglala Sioux Tribe has lobbied for a new high school in Pine Ridge since 1973. In the mid-1970s, Congress appropriated money for planning and designing a school. But a BIA school burned down in Alaska and Pine Ridge was knocked off the BIA's priority list.

The BIA proposed a $4 million remodeling project at the school — including removal of asbestos — but the local school board turned it down, preferring a new school.

The Pine Ridge Elementary School also has major structural problems, including a 2-inch gap between the wall and floor of a fourth-grade classroom.

Looking at that gap Monday, Dick Powers, of the BIA's Office of Facility Management in Washington, said, "This is a serious problem. I'll get a structural engineer to look at this right away. It's kind of scary."

Powers was accompanied by Dick Glen of the BIA's Facility Management branch in Albuquerque.

The group also toured the high school aduitorium that school officials closed two weeks ago. Steam from the heating system has penetrated the walls. Plaster on the walls is cracking and wooden floors have buckled.

Last week, the Oglala Sioux Tribal Council gave the BIA 30 days to relocate the students or furnish new modular classrooms until a new school could be built. The council said it will seek an injunction in tribal court to close the school if some remedies aren't found by Feb. 25.

Manuel Moran, BIA school superintendent in Pine Ridge, said Tuesday that the BIA's plans for school construction haven't been officially announced, but he expects Pine Ridge "to be in the ratings."

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United States Senate
SELECT COMMITTEE ON INDIAN AFFAIRS
WASHINGTON, DC 20510

March 29, 1985

The Honorable James Abdnor
United States Senate
Washington, D.C. 20510

Dear Jim:

I checked into your problem in South Dakota with the failure of the Bureau of Indian Affairs to inspect Indian schools for potential asbestos hazards and the Environmental Protection Agency's deadline for grants for asbestos abatement. During the Select Committee's FY'86 budget oversight hearing, Acting Assistant Secretary for Indian Affairs, John Fritz, stated that the EPA's deadline was March 15th and that the BIA would have their report to EPA by that date. I am enclosing a copy of the pertinent pages of the hearing transcript.

According to the School Facilities Service official, Frank Latta, the BIA submitted fourteen (14) applications to EPA on March 15th, for funding consideration under the Asbestos Hazard Abatement Act of 1984. The following schools are: Cheyenne River School, Crow Creek School, Marty Indian School, Bull Head Day School, St. Francis School, Flandreau Indian School, Swift Bird School, Pierre Indian Learning Center, all of which are located in South Dakota. In North Dakota; Ojibwa School, Whiteshield School, and Twin Buttes School. In addition, the Indian school at Miccosukee, Florida and two Choctaw schools in Mississippi had applications submitted.

EPA will complete its review and award process by the first of June. Again, thank you for alerting us to your concerns regarding the potential asbestos hazards. I will continue to monitor the progress of EPA in addressing these dangerous conditions.

Warm regards.

Sincerely,

Mark Andrews

Mark Andrews
Chairman

MM:ih
Encl.

Senator Andrews. I understand a problem has recently arisen in South Dakota regarding failure of BIA to inspect Indian schools, particularly Indian contract schools, to determine asbestos hazards. I understand this problem may have occurred in North Dakota, Montana, and other States as well as in South Dakota. Could you explain or give us a little insight into this problem and tell us what is being done in order to meet the EPA grant deadline of March 1st for the 50 percent funding match for abatement?

Mr. Fritz. That deadline, Mr. Chairman, is really a March 15th deadline for meeting the asbestos hazard in schools act. Let's see, what is it called? Specifically the Asbestos School Hazard Abatement Act of 1984.

We currently have a representative, Mr. Frank Latta from the School Facilities Service, in Aberdeen working with a Tucson group who are doing a survey of 37 locations currently in South Dakota -- excuse me, in the Aberdeen area. In addition, we have an EPA representative and a representative from the Bureau of Indian Affairs safety office going to each of the affected locations and examining what needs to be done in terms of costs and how they're taking care of the proposed situation.

Mr. Latta will be back tomorrow. He will commence the drafting of the required report to EPA. We anticipate delivering it well in advance of March 15th, the dealine.

Over in Billings at this juncture we have defined only one site, but we are going through that record once again. In Billings the site is supposedly contained. We will verify and make sure. Mr. Latta is doing that, also.

Senator Andrews. Mr. Secretary, we have a number of other questions and I am sure my colleagues on the committee have a number of questions they would like to submit for the record.

Mr. Fritz. Certainly.

Senator Andrews. I think probably we can do it better if we will submit them for the record and let you answer them in detail so that we will have that information when we move ahead to approve the budget.

Mr. Fritz. Certainly.

Senator Andrews. Thank you very much for your appearance.

Mr. Fritz. Thank you.

Senator Andrews. I would next like to hear from the Indian Health Service, Dr. Robert Graham, the Administrator, and Dr. Everett Rhoades, the Director. Welcome to many. Welcome to many, doctor. We're glad to have you here. We would be pleased to hear your statement.

JAMES ABDNOR
South Dakota

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United States Senate
WASHINGTON, DC 20510

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February 13, 1985

The Honorable Lee M. Thomas
Administrator
U. S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

Dear Lee:

Enclosed is a copy of my letter to John W. Fritz, Acting Assistant Secretary for Indian Affairs at the Department of the Interior, concerning the responsibilities of the Bureau of Indian Affairs with respect to the Asbestos School Hazard Abatement Act of 1984 (ASHAA). Also enclosed for your review is a recent newspaper article on asbestos problems at the Pine Ridge High School on the Pine Ridge Reservation, together with my letters to Senator Andrews, Chairman of the Select Committee on Indian Affairs, asking that he and his committee colleagues look into the extent to which asbestos problems exist in BIA school facilities.

As I've indicated during our meetings, I am pleased with the way in which your agency has responded to the questions and concerns we have raised relative to the implementation of ASHAA. If at all possible, I would appreciate greatly having an asbestos expert from Region VIII on hand when the contractor selected by BIA performs asbestos abatement work at the Eagle Butte School in South Dakota. A firm from Kearney, Nebraska, Great Plains Asbestos, plans to begin work at Eagle Butte on February 22nd.

Given the concerns expressed by the Eagle Butte School Board, I am interested in ensuring that this project is completed safely, with appropriate precautions taken to prevent further exposure to the children and school employees at Eagle Butte.

Again, Lee, I appreciate greatly your assistance and that of your staff. I hope that someone from the Region VIII office will be on hand to oversee the Eagle Butte project, and I look forward to continuing to work with you to foster necessary asbestos abatement efforts in our nation's schools.

With best wishes,

Sincerely,

JAMES ABDNOR
United States Senator

JA/bam

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295

MAR 18 1985

Ref: 8AT-TS

Honorable James Abdnor
United States Senate
Washington, DC 20510

Dear Senator Abdnor:

Thank you for your kind letter to Lee Thomas regarding the efforts of our Agency pertaining to the Asbestos School Hazard Abatement Act of 1984.

Upon receiving your request to have an EPA representative present during the removal of the asbestos-containing material at the Eagle Butte School on the Cheyenne River Indian Reservation in South Dakota, we scheduled an inspection to review the work upon its completion to determine if the project was performed according to EPA guidance. In addition, Mr. Peter Dexter, Safety Officer of the Bureau of Indian Affairs' (BIA) Albuquerque Office and Mr. Ray Van Ostran, District Sanitarian of the Indian Health Service (IHS) from the Cheyenne River Indian Reservation were present during the actual removal operation. Both had been given sufficient training by EPA personnel on previous occasions to determine if the job was being properly handled. Mr. Charles Johanningmeier, representing EPA, arrived on Monday, February 25, reviewed the procedures which were employed and performed a visual inspection of the removal area. Both the procedures and visual inspection of the removal area met with Mr. Johanningmeier's approval. The removed material was transported and disposed of at the Pierre land disposal site.

After reviewing this site Mr. Johanningmeier, Mr. Peter Dexter and Mr. Allen Croft (IHS) proceeded to make site visits to BIA facilities in North and South Dakota which had not yet been inspected for friable materials. They were able to visit approximately 40 schools and the report on these visits is being finalized. We will supply your office with the final report when it is finished and we receive our copy. This was a key effort in the BIA project of identifying schools which are eligible for funding under the Asbestos School Hazard Abatement Act of 1984. EPA's participation in this manner saved the BIA several thousand dollars which they had intended to use for contracting out the project of surveying their facilities for asbestos, and assisted them in meeting the deadline for such a survey, which would not have been possible had they gone through with the contract effort.

Thank you for your interest and the support of your office in this matter and if we can be of further assistance please let me know.

Sincerely yours,

John G. Welles
Regional Administrator

JAMES ABDNOR
SOUTH DAKOTA

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WASHINGTON, DC 20510

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February 13, 1985

Mr. John W. Fritz
Acting Assistant Secretary for Indian Affairs
Department of the Interior
C Street between 18th & 19th, NW
Washington, D.C. 20240

Dear John:

As prime sponsor of the Asbestos School Hazard Abatement Act of 1984 (ASHAA -- Title V of P.L. 98-377), I am greatly distressed by the failure of the Bureau of Indian Affairs to meet its responsibilities as mandated by the Act.

Enclosed is a copy of an article which appeared in the February 5, 1985, Rapid City Journal, entitled "Asbestos Study Not Finished Due to 'Foul-Up.'" This article details a situation characteristic of the manner in which the BIA has responded -- or, rather, failed to respond -- to the possible presence of health-threatening asbestos in BIA school facilities.

On January 28, two individuals from your office and a member of my staff met with Environmental Protection Agency (EPA) staff, concerning BIA's role with respect to the implementation of the asbestos-in-schools program. EPA staff pointed out that all applications for asbestos abatement funding are to be submitted to the Administrator by March 1, 1985. Under ASHAA, awards will be made by June 6, 1985.

At least several BIA contract school facilities in my state contain asbestos which may pose a serious threat to the health of the children and school employees who occupy these buildings. The program I authored is designed to assist financially needy school systems with necessary abatement efforts. Knowing of possible problems in BIA school facilities, I included in ASHAA a minimum funding level for BIA schools of 1/2 of 1 percent of the total funds appropriated each year -- the same minimum provided for each of the 50 states. Thus, there should be no excuse for failure to address these problems in an expeditious manner, particularly when I have worked to ensure that funds are available for this purpose.

Your staff indicated that problems in BIA contract schools are restricted to the Aberdeen Area Region. I am not convinced that this is the case. Your agency does acknowledge, however, that there are friable asbestos problems in the region which encompasses my state. While EPA offered to assist in conducting inspections in the BIA contract schools in South Dakota in order to identify friable asbestos problems in time to seek assistance this year under ASHAA, I have learned that BIA has elected to accept bids for these inspections through April 1st. Given this arrangement, there is no way BIA will meet EPA's ASHAA application deadline of March 1.

John, to say I am displeased with this situation is putting it mildly. In view of EPA's filing deadline, not to mention what must be our prime concern -- the potential risk to the children attending these schools -- I ask that you give this matter your immediate attention. Also enclosed for your review are copies of my letters to Mr. Lee M. Thomas, Administrator of EPA, and the Honorable Mark Andrews, Chairman of the Senate Select Committee on Indian Affairs. I look forward to hearing from you.

With best wishes,

Sincerely,

JAMES ABDNOR
United States Senator

JA/bam

Enclosures

United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
WASHINGTON, D.C. 20245

IN REPLY REFER TO:

BCCO-1291

MAR 6 1985

Honorable James Abdnor
United States Senate
Washington, D.C. 20510

Dear Senator Abdnor:

This is in reply to your letter of February 13 regarding the asbestos abatement program.

After the January meeting the Environmental Protection Agency (EPA) staff informed us that the Bureau applications need not be in to our office until March 15. This was done with the understanding that we could hand-carry them to the EPA office with our priority list.

The Aberdeen Area Director has informed me that the Area survey being done by Universal Associates of Tucson will enable them to submit their applications by the March 15 deadline.

The asbestos problems have been taken care of at the Oglala Community School and at the Eagle Butte facility.

Let me assure you that your efforts and concern are deeply appreciated and that we are doing all we can to take advantage of the program.

Sincerely yours,

Deputy Assistant Secretary -
Indian Affairs (Operations)

STATEMENT OF
JOHN A. MOORE
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SENATE COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS

July 12, 1985

Mr. Chairman and members of the Committee, I am pleased to have this opportunity to provide testimony concerning the activities of the U.S Environmental Protection Agency (EPA) in connection with our asbestos program.

I believe we have made great strides in implementing our asbestos program. I want to take this opportunity to publicly commend the staff from all parts of the Agency who have worked together to accelerate and expand our program and to give it the momentum it now has.

EPA's Approach

I would like to discuss for a moment EPA's overall approach to its asbestos program. Our goal is to minimize inhalation of asbestos which is in place within buildings. Simply put - there are five steps to achieve this goal:

1) determine the presence and location of the asbestos-containing material;
2) evaluate its condition;
3) develop a plan to address the situation, which could include:
    - operations and maintenance, since the mere presence of asbestos does not dictate the need for removal;
    - abatement activities; and
    - notification of occupants and workers;
4) select qualified people to perform asbestos abatement work; and
5) dispose of the material in an appropriate manner.

The Agency's plan to realize its goal is to emphasize strong technical assistance activities, rulemaking when practicable, and active enforcement of these EPA rules. This choice of approach best accomodates the practical reality that decisions on asbestos are best made at the local level where actual site conditions can be evaluated on a case-by-case basis.

Over the past six months, there have been significant accomplishments in EPA's asbestos program. They include:

- ° implementation of the Asbestos School Hazard Abatement Act (ASHAA);
- ° revision of our primary asbestos guidance document;
- ° awarding grants to states for contractor certification and technical assistance programs;
- ° announcement of an immediately effective worker protection rule;
- ° establishment of three asbestos information and training centers and;
- ° publication of an asbestos waste management guidance document.

I will discuss each of these during the course of my testimony today, but I will focus on the ASHAA loan and grant program in some detail.

Asbestos in Schools: EPA Actions

The Asbestos in Schools Hazard Abatement Act was passed only 10 months ago. In December, we distributed funding applications to every school district (33,000) in the country. By February, we were assisting states in the hazard ranking of projects for national consideration. By late March, we had received applications from 1100 school districts representing more than 4800 schools and more than 8300 projects.

In April and May, staff from EPA's Regional Offices made over 1000 site visits to evaluate potential projects for funding. And, Mr. Chairman, on June 6, we met ASHAA's statutory deadline and announced the award of $45 million in loans and grants to 198 school districts representing 340 schools and 417 abatement projects. In keeping with the clear statutory preference for loans, EPA awarded $33 million of the available funds as loans and $12 million in the form of grants. Based on figures submitted by applicants, 4.7 million student and employee exposure hours per week will be eliminated when abatement work on ASHAA-funded projects is completed. I emphasize that these projects represent the most hazardous conditions in schools and, therefore, these benefits are very real.

The typical ASHAA-funded project went through several reviews before it was approved for funds.

° First, the state classified the project into one of six hazard categories using EPA's hazard ranking method. A project which had friable, severely damaged asbestos-containing material which was either exposed or in an air plenum was classified as a priority one project.

° Second, after EPA received the applications, they were reviewed for completeness. If key data elements were missing, EPA sent a request to the school district for the missing information.

° Third, the financial need formula was applied to all applicants. The formula measured the cost of an applicant's abatement projects and the per capita income of a public district or the operating budget of a private school to determine the amount and composition of the award.

° Fourth, EPA regional personnel visited 1,000 project sites to verify the seriousness of the asbestos hazard in the school and confirm the accuracy of the information provided by the school district.

° Fifth, EPA staff in Washington conducted a technical review of these 1,000 projects in May. The technical review phase allowed each project to be individually evaluated for severity of hazard, appropriateness of abatement method, cost-effectiveness, and financial need of the school or district. If necessary, calls were made to school officials or regional inspectors for clarifications.

As we implemented the loan and grant program, we relied heavily on the talent and cooperation of state officials, school district personnel, and education association representatives. Each of these groups contributed to the program through numerous discussions with EPA staff about our application form, the hazard ranking method and the financial need formula. This cooperation was an important factor in EPA's implementation of the loan and grant program. We intend to call on the expertise of these groups again in the coming weeks as we begin an evaluation of the program.

As you know, Mr. Chairman, there is consensus about the need to properly abate serious asbestos hazards in our nation's schools. EPA has targeted significant resources toward providing technical assistance to help schools identify and evaluate asbestos hazards and make appropriate abatement decisions. However, we continue to believe that direct funding of abatement projects in schools does not represent the most effective use of Federal resources.

In addition to the loan and grant program, the Asbestos-in-Schools Identification and Notification Rule has been a major focus of EPA's asbestos program since 1982. Identification of asbestos materials and notification of parents and employees is required. EPA has supplemented these requirements with vigorous enforcement and technical assistance programs. The number of school districts inspected in connection with the Schools Rule increased from 207 in FY 1983 to 1,918 in FY 1984, and there has been a gradual but steady increase in compliance with the rule.

Improved Guidance and Information

As EPA has gained more experience in dealing with asbestos matters over the past few years, we have recognized a need for more specialized and understandable guidance. Our attention during the past six months has been directed toward delivery of this kind of assistance in a variety of forms.

It is apparent that the evaluation process and resulting decisions concerning asbestos material in a building can be complex and emotionally charged. Once asbestos is identified, a degree of technical expertise is required both in assessing the condition of the material and in determining the appropriate action. The building owner has to make decisions about when to take an abatement action in an atmosphere where the public may be demanding immediate and comprehensive action.

To address this problem, EPA convened a panel of nationally known asbestos experts who have helped us revise our primary guidance document. The revised guidance lays out practicial steps for building owners and managers to take in identifying, evaluating, and taking action regarding asbestos. The panel convened in April, peer review took place in May and we have already distributed the new guidance to schools receiving ASHAA funds as well as state officials. The printed version of this document will be available this month.

In the last six months, EPA has opened asbestos information and training centers at the Georgia Institute of Technology in Atlanta, the University of Kansas in Kansas City, and Tufts University in Boston. The Centers have sponsored technical symposia and public awareness conferences for contractors and workers. The information centers offer three types of courses: a one day general awareness course; a three day abatement decision-making course; and a five day hands-on training course for abatement supervisors and workers. We are encouraged by the national response to the centers, and are considering opening a fourth center on the West Coast.

We have fostered the development of a model state contractor certification program, distributed it to all states, and are awarding grants for concractor certification activities to ten states. As a part of our contractor certification program we have developed a model training course for asbestos abatement contractors which will be presented for the first time to state officials this month.

In recent weeks, EPA's Office of Solid Waste published a manual which provides guidance on how best to handle asbestos-containing waste materials during generation, transport, and final disposal. The booklet summarizes EPA regulations and guidance to reflect state-of-the-art procedures currently being followed by knowledgeable asbestos waste handling firms. We have also distributed this manual to the states and to all

Improved Work Practices

Another problem we are working to solve is that of increased exposure due to incorrectly performed asbestos abatement projects. Newspaper accounts have reported that in some situations abatement has increased the hazard to students due to unnecessary or sloppy work performed by untrained workers. The Agency takes this problem quite seriously and has moved aggressively to address this problem.

As I announced two weeks ago, EPA is proposing a rule to reduce the unreasonable risk associated with asbestos abatement conducted by state and local public employees not covered by OSHA regulations. This rule will complement the Occupational Safety and Health Administration (OSHA) regulations that protect private sector workers from exposure to asbestos in occupational settings, and state regulations that protect public sector workers. Because of the serious and widespread occupational risk posed by asbestos abatement, EPA is making the rule immediately effective. The rule will be very similar to the OSHA asbestos standard and will close a regulatory gap by extending protection to those abatement workers who are not currently protected by state regulations. Currently, public employees in 27 states are not covered by OSHA state plans. Four additional states without OSHA state plans have implemented asbestos regulations. In addition, the rule includes a provision not in the current OSHA rule, requiring notification to EPA at least 10 days before an asbestos abatement project is begun using public employees. EPA will use this information to conduct inspections to enforce the rule.

As you know, OSHA has proposed a new asbestos standard and may adopt a final revised standard later this year.

I anticipate that we will revise our worker protection rule to be compatible with OSHA's revised asbestos standard so that the workers covered by the EPA rule would be afforded the same degree of protection as those covered by the OSHA standard.

I am convinced that this EPA rule can be effectively implemented and enforced and will substantially contribute to improving the health and safety of public employees.

We also feel strongly about the necessity of ensuring that each individual abatement project is conducted safely and will protect building occupants as well as workers. In fact, benefits of the worker protection rule will also accrue to building occupants. In addition, we are considering whether state or federal rules are needed that require that asbestos abatement be conducted under the direct supervision of a person trained in appropriate asbestos abatement techniques and practices. EPA is now analyzing whether this type of rule can be developed, implemented, and effectively enforced at the state or federal level. Of course, as for any federal rule, we will need to carefully ensure that findings under the Toxic Substances Control Act (TSCA) are fulfilled. We expect to make a decision about a TSCA rule in the fall.

We believe that state enforcement of certification requirements is an effective way to assure that abatement is conducted properly so that occupants as well as workers are protected. In fact, 14 states either have a contractor certification program in place, or have legislation pending. We believe that as additional states receive EPA's materials, training and assistance, new state programs will be initiated.

Resources

As an indication of EPA's commitment to our expanding program, EPA has significantly increased the staff available for providing technical assistance on asbestos questions and enforcing the current asbestos rule. The number of work years devoted to the activities has increased from 5 in fiscal year 1983, to 25 in fiscal year 1984, to 46 in fiscal year 1985. In addition, the funding available under an EPA grant to the American Association of Retired Persons (AARP) to hire and train asbestos technical advisiers and school asbestos inspectors has increased from $500,000 in fiscal year 1983, to $1.0 million in fiscal year 1984, to $2.0 million in fiscal year 1985. These funds are divided among technical assistance, ASHAA follow-up, and compliance activities. The AARP grant provides 67 staff years, and these employees have been particularly effective in their asbestos-related activities. Many are retired architects or engineers and bring years of experience, and thus credibility, to their recommendations and observations. These AARP employees will be used to monitor the loan and grant projects as well as to provide technical assistance to non-funded ASHAA applicants.

Finally, to better coordinate the projects I have just described, in December 1984, I created a new group called the Asbestos Action Program. The staff of this program report directly to me on the progress of the various asbestos-related activities. I believe that elevating the priority for coordination of the asbestos program to the Assistant Administrator's office has helped EPA accomplish these projects quickly and with the priority support of other staff offices in the Agency. This group will continue its efforts as we move into new activities in the future and continue to evaluate the effectiveness of our ongoing activities.

Conclusions

In summary, I believe the Agency has made substantial progress in implementing and expanding our asbestos activities over the last year and especially during the last six months. However, our program will not stop short of its goal -- to be certain that asbestos-containing materials are identified in buildings, and that abatement projects are carefully and safely performed. Over the next year, we will continue to work with schools, states, and building owners to see that these goals are achieved. Through Agency sponsored education and training programs, a state-of-the-art technical assistance program, and grants to states, we will continue to oversee the progress of this important program. To date, EPA's asbestos program has had a heavy focus on schools. We are conscious of the fact that these activities have a direct application to other structures such as public buildings. In the coming year we will also consider the need for standards for consultants associated with asbestos abatement work.

Mr. Chairman, I appreciate this opportunity to provide the Committee with this statement. I will be pleased to answer any questions you may have.

RESPONSES FROM THE ENVIRONMENTAL PROTECTION AGENCY

Response to Senator Stafford Question #1

Question: Several risk assessments on non-occupational asbestos exposure have concluded that in most buildings the risk to building occupants is low. More specifically, the two assessments about which we seem to hear the most are those of Ontario Royal Commission and Doctors Doll and Peto. How do you think those assessment should be interpreted?

Answer: There is not a philosophic disagreement between the Doll and Peto and the Ontario report conclusions and those of EPA. With respect to Doll and Peto, the major conclusion is that risks to British subjects from occupying buildings is small. (The figure cited is less than 1 death over next several years). This conclusion is not significantly at variance with the EPA position. In most buildings in this country, one finds asbestos that is still in good condition. As such, it poses a minimal risk. However, as buildings deteriorate, exposure to asbestos and therefore the risk increase proportionately. In such situations, significant risks can exist. Doll and Peto do not disagree with this point.

With respect to the potential for the presence of deteriorating asbestos, it is worth noting that use of asbestos in the 50's and 60's in Britain differed significantly from use in this country. For example, a major use of asbestos, both in this country and in Great Britain were as boiler wrap, pipe lagging, and millboard. However, in the U.S. numerous other uses of asbestos also were employed. These include use of friable asbestos in spray applications as insulation, and in a number of other products. Deterioration of asbestos in these other uses tends to result in higher risks.

The Ontario Commission also concludes that undisturbed asbestos poses minimal risks. They note, however, that in the event that asbestos were highly friable or disturbed, risk could result. As noted in the report:

"... the health risk to children remains insignificant because the level of exposure in asbestos containing schools has in general been so low. The exceptions are found in those instances where loose asbestos is being actively disturbed or is falling from the ceilings." (Ontario Report, p. 15).

In summary, EPA does not disagree markedly with the overall conclusions of these two reports concerning the risks from exposure in buildings. Specifically, the Agency recommends abatement of asbestos in those circumstances in which its physical condition presents an unreasonable risk.

Question from Senator Lautenberg

1. Q: Are the training programs just for managers, or are the employees who will actually be doing the work also being trained?

A: The courses offered at our three pilot asbestos information centers are geared toward a variety of audiences, as follows:

° a one-day General Awareness Course will be geared toward a general audience and will include indentification of asbestos-containing materials, health effects of asbestos, and abatement options.

° a three-day course geared toward abatement decision-making will focus on inspection, sampling, assessment, and abatement techniques and specification writing. A field trip to a building to show sampling techniques will also be included.

° a five-day course designed for those who do the actual abatement work. The course will cover abatement techniques and safe work practices including actual "hands on" abatement experience in a mock-up space. We expect supervisors to be the main attendees of this course.

Courses for employees who will be doing the actual abatement work are also being offered. Georgia Institute of Technology is offering one-day "asbestos workshops" that will provide the abatement worker with actual hands-on experience in a mock-up site. Tufts University is offering a 5 day hands-on course for the worker as well as a one-day pipe insulation and repair training seminar. Kansas University plans to begin worker training early next year.

Question from Senator Lautenberg

2. Q: What kind of follow-up is being done to check on the effectiveness of the training?

A: EPA is currently in the process of conducting an evaluation of our pilot centers and the courses they offer. Preliminary indications show that the centers are very successful and well received. Reviews by the attendees, forwarded to Headquarters by the centers, indicate that participants find the information beneficial. By early fall we plan to complete our evaluation of the pilot centers and hope to have information on the effectiveness of the training.

This year, we awarded grants to twelve states to begin operation of pilot contractor certification programs which included training components. As part of the Technical Assistance Program will be to monitor these grants at the regional level to determine whether State training programs have made a difference in the quality of abatement projects performed.

Question from Senator Lautenberg

3. Q: a) If a strict rule were instituted which would allow only trained workers to do asbestos abatement projects with Federal funds, is there sufficient training capacity available to handle the demand?

b) Are trained removal personnel available in every state?

A: (a & b) Yes, there are a sufficient amount of training opportunities available to meet a demand for trained workers in every state. Currently, EPA has three pilot asbestos information centers. We are encouraged by the national response to them and are considering opening a fourth center on the West Coast. These centers offer training courses to asbestos abatement workers as well as to supervisors of abatement projects.

Five states (Alabama, Maryland, New Jersey, New York and Oklahoma) already have functioning asbestos contractor certification and training programs. In addition to these states, eleven other states have introduced or recently passed legislation authorizing the establishment of such programs. Legislation has been enacted in Alaska, Arkansas, Connecticut Iowa, Kansas, Rhode Island and Washington. Legislation to estalish such programs has also been introduced in California, Colorado, Illinois and Massachusetts. In addition, twelve states have received technical assistance grants from EPA under the Asbestos School Hazard Abatement Act to set up pilot contractor certification programs including training courses. If these prove successful, the Agency plans to offer similar 1 year grants to additional states next year.

As part of our model contractor certification program, we have developed a training course for asbestos abatement contractors. Georgia Institute of Technology has developed the course materials. In addition, the Maryland Department of Health and Mental Hygiene has developed recommended contract specifications for asbestos abatement projects. These materials are made available to any state interested in using them.

Finally, a variety of private sector organizations already provide asbestos abatement training. If a strict requirement for training were instituted, we expect the number of private training courses would increase.

Question from Senator Lautenberg

3c. Q: How many adequately trained contractor personnel would you estimate are now available?

A: Training programs for contractor personnel have been established in several areas. We estimate since January that the three EPA-funded pilot asbestos information centers have trained over 200 contractors. Georgia Tech University has been running training courses for several years and has trained an additional 800 contractors. In the five states that currently have training programs, over 300 contractors have received training. The private associations that we know of have trained approximately 800 contractors. We are aware of other groups which offer contractor training, but we are unable to estimate the number of trained contractors who have been through those programs. We do know that there are certainly many more than those listed above that have received training in asbestos abatement methods.

Still, we believe that many contractor and abatement workers remain untrained. We will be directing resources during the next fiscal year to providing technical assistance, including training opportunities for contractors and workers.

Question from Senator Lautenberg

4. Q. What can EPA do to increase training capacity?

A. EPA is considering the addition of another asbestos information center to the existing three this year, most likely to serve the West Coast. In addition, our plans are to award 10-20 additional grants to states for pilot contractor certification programs. In addition, we believe that additional states will begin certification programs on their own.

Question from Senator Lautenberg

5. Q: What further steps do you think can be taken to assure that only trained contractors are doing this work? Might some system of sanctions be useful.

A: It is important to note that the current version of the ASHAA FY 1986 appropriation language that has been passed by both the Senate and House Appropriations Committees requires that only trained personnel can perform asbestos abatement projects funded with ASHAA funding. The language requires asbestos abatement personnel to either attend EPA approved training courses, or be state certified. EPA intends to expand existing training courses to assure that this requirement is met. This requirement will undoubtedly result in additional state and private training programs, and therefore the number of trained contractor personnel.

EPA believes that training is the key to assuring that abatement work is being done safely and thoroughly. Trained personnel are able to use their judgement during each individual abatement project to decide on the best way to limit exposure to building occupants, using EPA technical assistance as necessary. We are considering whether State or Federal rules are needed that require asbestos abatement be conducted under direct supervision of a trained person or by trained workers. We are now analyzing whether this type of rule can be developed, analyzed, and effectively enforced.

Senator Abdnor's Questions

1. Q: To what extent has the $50 million appropriated thus far enabled you to meet the legitimate needs of applicant school districts?

How much money might you have distributed to worthy applicants this year?

A: Under the Asbestos in Schools Hazard Abatement Act (ASHAA), if the Agency had funded every qualified project (those ranked in hazard categories 1, 2, or 3) located in school districts with some degree of financial need, approximately $225 million in loan and grant funds would have been distributed this year. The Agency believes however, that the $50 million awarded enabled it to address the most hazardous conditions in schools. We have no reliable estimate of the number of qualified projects which exist outside of the ASHAA applicant pool.

Senator Abdnor's Questions

2. Q: Pointing to reports of improperly executed abatement projects, some individuals claim asbestos removal results in hazards exceeding those that existed prior to abatement.

Would you please indicate how the agency is using funds made available under ASHAA to ensure safe and appropriate abatement actions?

A: A significant portion of the administrative set-aside funds provided by ASHAA has been used to develop programs to ensure safe and appropriate abatement actions. Grants have been awarded to twelve states to develop contractor certification/technical assistance programs. These programs are designed to ensure that abatement contractors and workers can perform competently by meeting certain prescribed qualification requirements.

ASHAA funds have also been used to establish three asbestos information centers around the country -- in Boston, Kansas City, and Atlanta. In addition to training provided for abatement contractors and workers, courses are offered for building owners and school officials which are designed to improve the quality of their decision-making about asbestos hazards and their abatement.

Development and distribution of new and revised asbestos guidance documents is another activity for which ASHAA funds have been used. A revision of EPA's primary asbestos guidance document, entitled "Guidance for Controlling Asbestos-Containing Materials in Buildings," was recently completed. A new guidance document for service and maintenance personnel has also been completed. Both of these documents have been mailed to school districts and specific schools within those districts that applied for ASHAA funds.

Controlling Exposures to Asbestos in Buildings: The Ontario Royal Commission's Approach

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July, 1985

Controlling Exposures to Asbestos in Buildings: The Ontario Royal Commission's Approach

Donald N. Dewees[1]

I. Introduction

I am pleased to appear to discuss the report of the Ontario Royal Commission on Asbestos, or RCA for short, as it relates to asbestos in buildings. First I should explain that a Royal Commission is an independent body of distinguished individuals appointed by a government to study and report impartially on a particular issue. The Commission may hold hearings, conduct research, consult with experts, and otherwise gather information necessary for its report. A Royal Commission ceases to exist when it reports to the government. Its recommendations are then studied and acted upon (or not acted upon) as the government finds appropriate.

The Ontario Royal Commission on Asbestos was created in April of 1980 upon the recommendation of the Ontario Minister of Labour with a mandate to "study and report to the Minister of Labour on the matter of health and safety arising from the use of asbestos in Ontario". (RCA, 1984, p. xiii.) In May of 1984 it presented its report consisting of three volumes covering over 900 pages. Chapters 9 and 10 of this report deal with the problems of asbestos in buildings. In the fall of 1984, the Ministry of Labour introduced a "Proposed Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations", which incorporated a number of recommendations of the Royal Commission. This proposed regulation has been amended, but has not been adopted, as of July, 1985.

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II. Exposures, Risks and Control Costs

A. Building Occupants

Studies of airborne asbestos fiber levels in buildings have been performed by Sebastien (1980), Nicholson, Rohl and Weisman (1975), Pinchin (1982), and Constant (1983). The Ontario Royal Commission on Asbestos draws the following conclusion regarding the exposure of occupants of buildings with asbestos-containing friable material (ACFM):

> ". . . we conclude that the majority of exposures of building occupants in buildings with substantial amounts of friable asbestos would be to fibre levels less than 0.001 f/cc, with a few single readings as high as 0.01 f/cc representing the highest likely exposure." (RCA, 1984, p. 577.)

The RCA goes on to identify those situations that might lead to greater exposures, stating:

> "We conclude that building occupants are not subject to asbestos fibre exposure in excess of a very small fraction of the recently adopted Ontario workplace control limits [1.0 f/cc], except where: (i) the occupant

> is in the immediate vicinity of work that disturbs friable asbestos-containing insulation; (ii) the occupant is within the range of air circulation of work that disturbs friable asbestos-containing insulation; or (iii) significant quantities of friable asbestos-containing insulation have fallen onto building surfaces and are being disturbed." (RCA, 1984, p. 579.)

These conclusions are probably generally applicable in the United States as well as in Ontario, since they are based on data from both countries.

The health risks arising out of exposures to airborne asbestos in buildings may be estimated using a dose-response model and assumptions about the characteristics of the exposed population. Such models, which predict the incidence or mortality from asbestos-related lung cancer and mesothelioma, have been published by the RCA (1984, Appendix to Chapter 7), by CHAP (1983), OSHA (1983), NAS (1984, P. 208) and most recently by Doll and Peto (1985). The models differ in some assumptions and estimated parameters, but all are similar in structure, and their predictions are not seriously different with regard to risks from exposures in buildings. The RCA model estimates mortality risks that are greater than those of some other models, and less than those of others. According to the RCA model, a cohort of one million persons exposed to airborne asbestos concentrations of 0.001 f/cc for 10 years starting at age 22 might, when all members of the cohort have died of various causes, have experienced 15.6 deaths from asbestos disease. This risk almost doubles if first exposure is at age 7, and is reduced to 9 if first exposure is at age 35.

After examining the exposure of building occupants, and estimating the resulting health risks, the RCA weighs those risks against risks from other sources faced by the general public, stating:

> "Because [the risks] are orders of magnitude below the other risks faced by the general population, we conclude that these risks are not significant. While the health risk from asbestos in buildings may not be exactly zero, it is far below risks faced every day by Canadians in their ordinary lives. The risk to occupants from asbestos in buildings is a small fraction of the risks faced by workers exposed to asbestos under the 1 f/cc control limit for chrysotile. It is less than 1/50 as great as the risk of commuting by car to and from those buildings." (RCA, 1984, p. 585.)

This conclusion does not cover the three exceptional situations identified in the previous quotation in this section. The RCA goes on to note that since the risk to occupants is not significant, and since control work necessarily exposes control workers to significant risks, a universal program to remove asbestos from buildings is not warranted. The program to remove asbestos from Ontario schools is described as "... an over-reaction, albeit well-intentioned, to public concern vigorously expressed by parents alarmed by perceived health risks to their children." (RCA, 1984, p. 588.)

B. Maintenance, Renovation, Removal and Demolition Workers

While the exposure of passive building occupants to airborne asbestos fibers is generally very low, workers who disturb asbestos insulation may be exposed to asbestos fiber levels that exceed current workplace exposure limits in the United States and

Ontario. High airborne asbestos fiber levels may be caused by asbestos removal, enclosure or encapsulation, or by renovation or maintenance work that disturbs ACFM. (Paik, Walcott and Brogan, 1983, p. 431; Pinchin, 1982, p. 7.17.) These high fiber levels can create risks for the workers themselves and for bulding occupants, if proper precautions are not observed.

The likelihood of these high exposures led the Ontario RCA to conclude that while the presence of ACFM in buildings does not in general cause significant health risks for building occupants, it may cause significant risks for building workers, including custodial, maintenance, renovation, removal and demolition workers. These risks require that proper precautions be taken to limit the exposures suffered by these workers. (RCA, 1985, p. 593.) Such precautions may include encapsulation, enclosure or removal of the asbestos itself. They may also include instituting a program of maintenance and custodial control while leaving the asbestos in the building.

C. Costs of Asbestos Control

Controlling exposures caused by asbestos materials in a building involves two types of cost. The obvious cost is the contractual cost of the control work itself, that is, the cost of encapsulation, enclosure or removal of the asbestos, and the cost of maintenance and custodial control programs performed by permanent staff. The less obvious cost is the dislocation cost for the occupants of the building who may be displaced when the control work is performed. In the case of primary and secondary schools, the work is often performed during the summer, so the cost of dislocation is minimal. If office space must be vacated during control work, costs may be incurred for moving, for renting alternate space, and for lost productivity of the staff during preparation for and recovery from the move.

III. Recommendations of the Ontario Royal Commission

Having concluded that the risks caused by the presence of friable asbestos-containing materials are very different for building occupants and for building workers, the Ontario Royal Commission on Asbestos frames recommendations designed to protect both groups. For the protection of both groups, the RCA recommends prohibiting the spraying of ACFM containing more than 1% asbestos, and the application of ACFM containing more than 1% asbestos to pipes and boilers. (RCA, 1984, pp. 553, 557.) For the protection of building occupants, the RCA singles out the situation where significant quantities of friable insulation have fallen onto building surfaces and are being disturbed. In this situation, the RCA recommends that if the insulation was installed before 1974, the building owner should be required to have the material tested to determine whether it contains asbestos. If friable asbestos is present, the owner must enclose, encapsulate, or remove the asbestos-containing material, following work practices set out elsewhere. Pending that control work, a program of maintenance and custodial control must be established. (RCA, 1984, p. 589.) These recommendations should protect building occupants against the possibility that damaged ACFM might cause airborne asbestos levels significantly above the level judged not to cause a significant health risk. The occupants are protected from exposure to asbestos that is disturbed by work in the building by recommended procedures, discussed below, governing that work.

The RCA's recommended regulations to protect those who work on the building itself, which will also protect building occupants, cover a number of distinct topics: when to inspect for ACFM, what to do if ACFM is found, maintenance and custodial control, choosing among control alternatives, dealing with asbestos at building demolition, contract provisions, and safe practices for work that disturbs asbestos. Each of these will be discussed in turn.

A. When to Inspect for Asbestos-Containing Friable Materials

The RCA does not recommend that all asbestos be removed at once. However, work that disturbs ACFM may raise health risks for building occupants and for the workers themselves. To protect against such health risks, it is necessary that friable insulation be inspected before proceeding with work that might disturb it, to determine whether it contains asbestos. The RCA recommends that the owner of a building in which insulation was installed or replaced before 1974, the characteristics of which indicate that it might contain asbestos, should be required to cause the building, or relevant part of the building, to be inspected for ACFM prior to demolition, renovation, or maintenance or custodial work that would disturb the friable material. (RCA, 1984, p. 604.) Alternatively, the owner may avoid the inspection by assuming that ACFM is present, and following appropriate procedures. This recommendation ensures that any work that might disturb ACFM will be preceeded by an inspection and tests to determine whether asbestos is present, or that safe work practices will be followed, so that no unknowing disturbance of this material will occur.

B. What to Do if Asbestos is Found

If asbestos is discovered in a required inspection, the owner should be required to label the material, and to maintain a record of the results of the inspection, which must be shown upon request to any building occupant or worker in the building. (RCA, 1984, p. 605.) If demolition is planned, the material must be removed before demolition, following appropriate work practices. If renovation, maintenance or custodial work is planned, the appropriate safe practices must be followed. (RCA, 1984, p. 604.)

C. Maintenance and Custodial Control

Maintenance and custodial control is a set of procedures designed to ensure that the presence of ACFM in a building does not lead to excessive airborne asbestos fiber levels. These procedures include informing regular building workers, including custodial and maintenance staff, of the location of ACFM in the building, of the risks of breathing asbestos fibers, and of the methods by which exposures to these fibers may be reduced. Workers should be trained in wet-cleaning methods, and in the use of respirators and high efficiency particulate air filtered vacuums. ACFM in the building should be inspected regularly, loose material should be cleaned up, and any damage to the material should be repaired. A building owner should be responsible for establishing a maintenance and custodial control program that is appropriate for the particular building, and for submitting a description of the program to the Ministry of Labour. (RCA, 1984, p. 610.) In cases where the custodial or maintenance work on a building is handled by an outside contractor rather than the building owner's staff, the duty to establish a maintenance and custodial control program should rest on the contractor as well as on the building owner. (RCA, 1984, p. 611.)

D. Choosing Among Control Alternatives

I have noted that when ACFM is discovered in a building, the RCA recommends that a program of maintenance and custodial control be instituted. If the material is falling onto building surfaces or is to be disturbed, then it is necessary to enclose, encapsulate, or remove the ACFM. The RCA notes that enclosure may be particularly appropriate for pipe and boiler insulation, where wrapping the material may prevent fiber release until work on the pipe or boiler is required. (RCA, 1984, p. 612.) Encapsulation is not encouraged, because the encapsulant adds weight that may cause insulation to fall loose, and because encapsulation will prevent soaking the insulation with water when it must finally be removed, thus greatly increasing the airborne asbestos fiber levels during removal work. In fact, the RCA recommends that encapsulation should only be performed if the insulation is in good condition and is sufficiently thin that it can be thoroughly penetrated by the encapsulant, or if removal or enclosure is not practicable. (RCA, 1984, p. 612.) Removal is regarded as always appropriate.

E. Building Demolition

Demolishing a building that contains ACFM can cause elevated asbestos fiber levels both for the demolition workers and for those in the vicinity of the building being demolished. The RCA does not find work procedures that would ensure control of airborne asbestos fiber levels during demolition, so it recommends that the owner of a building containing ACFM must be required to remove the material prior to demolition of the building. (RCA, 1984, p. 617.)

F. Contract Provisions

The recommendations discussed above impose new and potentially expensive requirements on building owners. It might be ir the financial interest of a building owner not to disclose potential asbestos hazards to a contractor. Furthermore, it might be in the financial interest of a contractor working on a fixed price contract to ignore asbestos hazards that were discovered in the course of his work. In order to encourage complete disclosure of potential asbestos hazards by the owner to a contractor, the RCA recommends requiring that contracts for demolition, renovation, maintenance and custodial work disclose all known locations of ACFM that might be disturbed by the work. To reinforce this requirement, it recommends that if in the course of the work ACFM of which the contractor was not notified is discovered, adequate precautions should be taken for worker protection, at the sole expense of the building owner. (RCA, 1984, p. 611, 618.) This latter provision, which would fundamentally affect the contractual relationship between building owners and contractors, ensures that a building owner cannot gain financially by concealing the location of ACFM from a contractor. In addition, the contractor has nothing to lose by reporting undisclosed ACFM discovered during the course of his work.

G. Work Practices

One of the most difficult issues dealt with by the RCA in its analysis of the problems of asbestos in buildings is the specification of safe work practices to be used when performing work that disturbs asbestos. A wide range of situations must be covered, from replacing light fixtures where sprayed insulation may be disturbed, to replacing a pipe covered with asbestos-containing insulation, to a major asbestos removal job. The work practices must protect the workers themselves, protect occupants of the building outside the work area, and ensure that the building is in a safe condition when the work is finished.

The solution adopted by the RCA is to define three sets of precautions, identified as "A", "B", and "C", and then to identify the types of work that would require each precaution. Precautions A, the minimum precautions, require that the worker wear a respirator, that power tools be equipped with a special dust collector, and that the worker receive information and training in the risks of asbestos and ways to reduce these risks. Precautions B add to this list a set of requirements including a barrier isolating the work area, protective clothing and washing facilities for workers, proper clean-up of the work area, and wetting of asbestos materials prior to disturbance, where practicable. Precautions C add to precautions B requirements that the work area be sealed off by an airtight barrier, workers are to have showers and change rooms, and a two-stage clean-up must follow the work. (RCA, 1984, p. 622-623.)

The next problem is to define which set of precautions will be required in any work situation. The RCA suggests a scheme for classifying control work by the type of insulation and the size of job. Maintenance, renovation and custodial work is classified by the type of work and its extent. See Table 1. The table is only an example, however, and the RCA recommends that the

Ministry of Labour consult with labor and industry groups to define what constitutes a large, medium or small control job, and what constitutes major, intermediate, or minor work of any other type. (RCA, 1984, p. 625.)

IV. Summary

No one can doubt the serious health hazards posed by the inhalation of high concentrations of asbestos fibers over a substantial period of time. The tragic legacy of the exposure of industrial workers and insulation workers to high asbestos concentrations from World War II to the late 1960's has been thoroughly documented. By contrast, the exposure of building occupants to asbestos fiber concentrations is extremely small, if the asbestos is in good condition and not being disturbed. The health risk to those occupants is correspondingly small.

The regulatory scheme recommended by the Ontario RCA, which protects building occupants and workers, is comprehensive. It specifies when to inspect and test for asbestos-containing friable materials, and what to do when the results of the tests are in. It indicates when to take corrective action, and how to protect workers during this action. The recommendations are not detailed, so room for judgment will remain, as it must because of the enormous variation in the asbestos problems found in buildings. Still, a framework is provided within which these judgments can be made with the obligations on all parties clearly defined.

References

Constant, Paul C. Jr, et al. *Airborne Asbestos Levels in Schools*. EPA 560/5-83-003. Washington, D.C.: U.S. Environmental Protection Agency, Office of Toxic Substances. 1983.

CHAP. Chronic Hazard Advisory Panel on Asbestos. *Report to the U.S. Consumer Product Safety Commission.* Washington, D.C.: U.S. Consumer Product Saftey Commission. July, 1983.

Doll, Richard, and Julian Peto. *Asbestos-Effects on Health of Exposure to Asbestos*. London: H.M.S.O. 1985.

NAS. Committee on Nonoccupational Health Risks of Asbestiform Fibers, National Research Council, National Academy of Sciences. *Asbestiform Fibers: Nonoccupational Health Risks.* Washington, D.C.: National Academy Press, 1984.

OSHA. U.S. Department of Labor. Occupational Safety and Health Administration. *Quantitative Risk Assessment for Asbestos Related Cancers.* (Mimeo) Washington, D.C.: OSHA. October, 1983.

Paik, Nam Won, Richard J. Walcott and Patricia A. Brogan. "Worker Exposure to Asbestos During Removal of Sprayed Material and Renvoation Activity in Buildings Containing Sprayed Material". *American Industrial Hygiene Association Journal.* 44:6. June, 1983. pp. 428-432.

Pinchin, Donald J. *Asbestos in Buildings.* Royal Commission on Asbestos Study Series, no. 8. Toronto: Royal Commission on Asbestos. 1982.

RCA. Ontario Royal Commission on Asbestos. Report of the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario. Toronto: Queen's Printer, 1984.

Sebastien, Patrick, et al. Measurement of Asbestos Pollution Inside Buildings Sprayed with Asbestos. Translation of a document prepared for the Government of France, Ministry of Health and Ministry for the Quality of Life Environment, 1977. EPA 560/13/80-026. Washington, D.C.: U.S. Environmental Protection Agency. August, 1980.

Table 1

Procedures for Safe Work with Asbestos in Buildings

	Procedures		
CONTROL WORK			
	Size of Job		
	Large	Medium	Small
Removal			
Pipe and Boiler	C	C	B
Spray - Dry	C	C	C
Wet	C	B	B
Encapsulation, Enclosure			
Pipe and Boiler	B	B	A
Spray - Dry	C	C	B
Wet	C	B	A
RENOVATION, MAINTENANCE, AND CUSTODIAL WORK			
	Extent of Work, Dust Level, Fiber Type		
	Major	Intermediate	Minor
Renovation			
Pipe and Boiler	Control	B	A
Spray - Dry	Control	Control	B
Wet	Control	B	A
Maintenance and Custodial Projects	B	B	A
Regular Maintenance	M&CC	M&CC	M&CC
Regular Custodial Work	M&CC	M&CC	M&CC
OTHER			A

Definitions of precautions:

A	Minimum precautions
B	Intermediate precautions
C	Maximum precautions
M&CC	Management and custodial control
Control	Removal, encapsulation or enclosure

Source: RCA (1984, p. 626.)

TESTIMONY OF

MAX EISENBERG, PH.D.
DIRECTOR OF SCIENCE AND ENVIRONMENTAL HEALTH
OFFICE OF ENVIRONMENTAL PROGRAMS
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE
ON

ASBESTOS

BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

JULY 11, 1985

Notes for Senate Testimony

Governor's Executive Order on Asbestos Signed April 13, 1983

State employees trained - 1,749

Legislation - July 1, 1982

Licensed Contractors - 190 Out of state about 20% or 38

Trained workers - 6,500

Active Workers - 4,257

Approved Training Courses - 17

Number of enforcement actions - 62

Could suggest national criteria for "must abate" conditions with each project judged on a case by case basis by "certified" professionals.

Air monitoring is not a good risk predictor. It is done at a single point in time and not necessarily representative of present and/or future conditions. Air standard would be of no use in making abatement decisions. It might be useful as a reoccupany standard.

I am pleased to have the opportunity to share the Maryland Regulatory Asbestos Program with you today. The State of Maryland takes asbestos seriously and has implemented several programs which address some of the issues surrounding asbestos and asbestos abatement. These programs include an asbestos abatement contractor licensing program, a certification program for worker training and a State employee asbestos program. Additionally, we are working with the Environmental Protection Agency (EPA) under a cooperative agreement for the Asbestos in Schools Program. I will limit my discussion today principally to the regulatory program.

Several schools in the State recently received monies from the federal government totalling 1.5 million dollars to abate some major asbestos hazards. The projects funded were only 14 of the 231 requests for asbestos abatement funds under the Asbestos School Hazard Abatement Act of 1984.

In January of 1979, the Maryland Department of Health and Mental Hygiene (DHMH) began a study of the asbestos situation within the State public school system in cooperation with the Maryland Department of Education (MDOE).

Maryland held regional seminars for school officials where the health effects of asbestos, sampling and analysis, and abatement techniques were discussed. In these presentations we trained personnel in the appropriate techniques to conduct voluntary surveys. To provide a level of confidence on the accuracy of sample analysis, a special laboratory arrangement was provided incorporating appropriate quality control procedures.

In accordance with PL 96-270, Asbestos School Hazard Determination and Control Act of 1980, MDOE developed a State plan related to asbestos detection and control. In April and May of 1981, MDOE in cooperation with DHMH, conducted 4 additional seminars for public and private school systems to provide them with the latest technical and legal information related to asbestos as well as to explain the recordkeeping and reporting requirements of the Act. One-day workshops were again held in July and August of 1984 covering topics which included a comprehensive asbestos management program, asbestos related litigation, maintenance procedures and automotive repair procedures.

The Maryland Public School Construction Program has implemented two activities related to asbestos in schools. First, all State funded renovation projects are reviewed for potential asbestos involvement. Second, a management program for asbestos in relocatable classrooms was issued to all school systems.

As a result of Maryland's strong public awareness regarding asbestos issues the General Assembly felt compelled to address the issue of asbestos in demolition, renovation, encapsulation and removal operations. Although some regulations controlling asbestos already existed at the federal level, application of those requirements to those types of job activities were sporadic at best. There is difficulty in applying regulations to workplaces which routinely change locations and to activities which may not occur on a daily basis. The Maryland General Assembly following a review of the existing information on asbestos and job activities which disturb it concluded that:

1. Exposure to asbestos, a known carcinogenic agent, creates a significant hazard to the health of the people of the State;

2. Projects to remove asbestos expose increasingly large numbers of asbestos removers to this hazard; and,

3. It is in the public interest to protect removers from this hazard by requiring adherence to strict safety standards on asbestos removal projects.

During the 1982 Maryland legislative session, a bill was passed which required the development and implementation of a program to control the removal and encapsulation of abestos by requiring the licensing of business entities engaged in such activities and the training of workers. In December, 1982, the Department promulgated two regulations, "Toxic Air Pollutants," and "License to Remove or Encapsulate Asbestos." The first is a work practice standard intended to minimize worker and public exposure to asbestos by requiring specific work practices to be utilized in performing asbestos projects. The work practices regulation includes the general requirements of:

1. Sealing the work area completely, using plastic sheeting of at least 6 mil thickness.
2. Position caution signs where airborne fibers may be present.
3. Using a surfactant approved for wetting friable asbestos.
4. Sealing asbestos waste in clearly marked containers and dispose of it in an approved landfill.

The second is a worker protection regulation incorporating the licensing and training requirements of the bill. The regulations became effective on February 25, 1983 and July 1, 1983 respectfully.

The Maryland regulations outline the operation of a licensing system which covers all business entities engaged in asbestos projects. However, they did not include government units doing the work themselves. This exemption included public but not private or parochial schools. During the last legislative session the law was amended to include public units except those state agencies which are subject to the Governor's Executive Order of April, 1983, setting up the State Employees Asbestos Program. The Maryland licensing regulation, unlike the notification requirment of NESHAP, has no job size limitations for its applicability. Thus, even businesses which only occasionally engage in limited asbestos removal as needed to perform their normal work activities, such as plumbers or electricians, are required to obtain a license.

The work practice regulations apply to "any person engaged in an asbestos project within Maryland." Asbestos projects are defined under the regulation as "any activity which requires the demolition, removal renovation or encapsulation of asbestos containing materials."

The regulations require that the Air Management Administration of the DHMH be notified prior to the commencement of a project when more than 260 linear feet or 160 square feet of friable asbestos material are involved (NESHAP requirement). All NESHAP projects are inspected at least once during the time work is in progress. In addition to the NESHAP notification requirement, a business entity must notify the Department of its first two asbestos projects, regardless of size, after obtaining its license. Each license holder is inspected at least once a year.

Exemptions from the required work practices must be requested in writing on a case-by-case basis. The Department may approve alternate procedures if the business entity can demonstrate that compliance with the required procedures is not practical or not feasible and that the proposed method provides equivalent protection.

A primary goal of the asbestos licensing regulation is the protection of workers engaged in asbestos projects. The worker protection requirements apply to all asbestos workers regardless of frequency of job activities involving asbestos or the severity of exposure.

Worker protection is achieved through a multi-faceted program which includes:

1. A Written respiratory protection program as per OSHA 29 CFR 1910.134 - Respiratory Protection Standard.

2. A physical examination on a yearly basis to determine the fitness of each individual worker who may, during the course of his activities, encounter asbestos and be required to wear

a respirator.

3. Initial training and annual review courses to ensure that employees are thoroughly familiar with the material they are working with, the hazards associated with asbestos and the available methods to reduce exposure.

5. Appropriate personal hygiene - the prohibition of smoking, eating, drinking and chewing of gum or tobacco in the work area.

All workers must attend an initial asbestos training course. The topics that must be adequately covered include:

1. Recognition of asbestos including its physical characteristics and uses.

2. Health hazards of asbestos including the relationship between asbestos exposure, smoking and disease.

3. Worker protection including available engineering controls such as negative pressure ventilation units and locally exhausted hand tools.

4. Work practices including area preparation.

5. Respiratory protection including respirator selection, use, care and limitations.

6. All requirements of the EPA NESHAPS on asbestos, OSHA respirator protection and asbestos standards, and Maryland DHMH regulations.

Training courses must be approved by the Department. There are strict minimum standards for the credentials of those persons giving or supervising the courses. Each class must train no more than 20 students. Staff from the DHMH sit in on each course prior to awarding final approval. Course approval is for one year.

Applications for Asbestos Training Course Approval must include:

1. A copy or description of course handouts.
2. A detailed description of the course content and the amount of time allotted to each major topic.
3. A description of the teaching methods that will be utilized and a list of titles of all audio-visual aids.
4. A list of all personnel to be involved in the course preparation and presentation, and a brief description of the background and qualifications of each.
5. A description of student evaluation methods to be used.
6. Miscellaneous administrative information (e.g., Course Sponsor, Course Director, location of courses, fees, limitations on attendance, recordkeeping procedures).
7. A list of information to be included on the certification card.

The annual review course must review important issues covered in the initial course, particularly work practices and worker protection. It should also keep workers and supervisors informed as to state-of-the-art and provide updates on the regulations, their trends and enforcement.

Enforcement of regulation provisions is accomplished by worksite inspections and maintaining a computerized tracking system for licensees, trained workers, and notices of violations.

The Maryland Asbestos removal regulations seem to be achieving their goal: the protection of workers and the people of the State from unnecessary exposure to asbestos. Proper worker protection and work practices are being utilized consistently. These factors all reduce the extent of exposure.

The contractors themselves have found that the regulation places them all on an equal footing when bidding for projects, since the requirements for proper removal of asbestos are now well known. It is less likely that a job will be extremely underbid by someone with no experience in proper techniques.

The Department's ability to track projects has increased partly due to public awareness and partly due to the intensive training provided to asbestos removal workers. There is an increased sense of security regarding asbestos abatement activities and their safe performance in the State.

Following the passage of the Asbestos School Hazard Abatement Act of 1984, the EPA approached Maryland about developing model guidelines for asbestos abatement contract specifications and model guidelines for asbestos contractor licensing programs. These documents were developed under an EPA funded cooperative agreement with the State and have been distributed to all states. There have been three workshops where these documents have been presented and discussed. Additionally, they have been distributed to all the school districts that made application for funds under the Asbestos School Hazard Abatement Act of 1984.

The model contract specifications is a valuable tool which may be utilized by a building owner for any asbestos project which will require a contractor. The specifications incorporate the appropriate safety and work practice requirements so necessary to complete an abatement project.

This gives you an overview of the Maryland Regulatory Asbestos Program. The program has been in effect for two years. We are currently reviewing our regulations based on the amendment to the law made by the General Assembly and our experience over the life of the program.

Maryland historically has had a strong program in public health. Our asbestos program is an example of our efforts to protect the health and the environment of Maryland citizens.

Mr. Chairman, I appreciate the opportunity to provide the Committee with this statement. I would be pleased to answer any questions you might have.

Thank you very much.

State of Maryland

OFFICE OF ENVIRONMENTAL PROGRAMS
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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Adele Wilzack, R.N., M.S., Secretary
William M. Eichbaum, Assistant Secretary

September 4, 1985

The Honorable Robert T. Stafford
United States Senate
Chairman, Committee on Environment
and Public Works
Washington, D.C. 20510

Dear Senator Stafford:

Thank you for allowing me to appear before your Committee at the July 12, 1985 asbestos hearing.

In response to the question in your letter of July 18, 1985, I should first like to point out that because of Maryland's extensive involvement in asbestos issues over the years our needs and perceptions may differ from many other states.

EPA's School Asbestos Program has focused on technical assistance, enforcement of self-inspection rules and most recently, provision of low interest loans and grants to schools to facilitate abatement of asbestos hazards. Concurrent with the funding assistance has been an increased effort to develop quality control through model contract specifications and licensing and certification programs. We believe that this direction is appropriate and in fact would encourage EPA to play a stronger role in the training of individuals who have responsibility for supervising and inspecting abatement projects at the local level.

We would urge EPA to assist the states by:

(1) establishing more definitive protocols for determining when asbestos-containing materials in buildings are hazardous, with appropriate guidance criteria for "must-abate" conditions, and;

(2) developing appropriate corrective action guidance when asbestos-containing materials in buildings are determined to be hazardous

and, in general, provide enhanced technical assistance, training and guidance to the states.

Thank you again for the opportunity to comment on this important issue.

Sincerely,

Max Eisenberg

Max Eisenberg, Ph.D., Director
Science and Environmental Health

ME:pas

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TESTIMONY

BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE

BY
LAVERNE GRADY
NEW JERSEY PTA HEALTH AND MENTAL HEALTH CHAIRMAN
THE NATIONAL PARENT-TEACHER ASSOCIATION

July 12, 1985
WASHINGTON, D.C.

Mr. Chairman and distinguished members of the Senate Committee on Environment and Public Works: I am Laverne Grady, and I have been an active member of the National PTA for 26 years. I currently serve as the New Jersey PTA Health and Mental Health Chairman. I have also served as President of the Bergen County Council of PTAs from 1982 through 1984, and I have served as a PTA unit president at an elementary school, a junior high school, and the high school in Teaneck, New Jersey.

On behalf of the 5.6 million volunteer members of the National PTA --- parents, teachers and other interested citizens from over 25,000 local units around the country and in overseas schools -- I appreciate this opportunity to present testimony before the Committee regarding the problem of asbestos in our schools and the question of whether the Asbestos School Hazard Abatement Act of 1984 (ASHAA) and regulatory efforts of the Environmental Protection Agency (EPA) are addressing that problem.

Since its inception in 1897, the National PTA has worked to secure laws for the protection of the health and welfare of this nation's children and youth. The Legislative Program of the National PTA, which is approved by the Board of Directors each year, and which provides the authority for all government-related activity by the National PTA, currently includes a Legislative Directive on Asbestos Removal, which expresses particular support for the Asbestos School Hazard Abatement Act. I will discuss our views regarding the extent to which ASHAA and other past and present legislative and regulatory efforts have begun to address the asbestos in schools problem, and the urgent need for further action by Congress to ensure that our children will no longer be exposed to the hazards of asbestos and to the resulting risks of cancer and disease.

As you know, Mr. Chairman, asbestos was used frequently in schools built or renovated between 1946 and 1972, because of its strength as well as its fireproofing, insulating, acoustical, and decorative properties. However, in the early 1970s, it was discovered that when asbestos-containing materials become "friable" -- readily crumbled by hand pressure -- invisible asbestos fibers may become airborne. These tiny fibers, when inhaled, may cause asbestosis (a debilitating lung disease), mesothelioma (a rare cancer of the chest and abdominal lining), and lung cancer. The Environmental Protection Agency and the scientific community agree that no safe level of asbestos exposure has been demonstrated; thus, any exposure could pose risks of disease and cancer. Since the symptoms of these diseases do not appear until 15 to 40 years after first exposure, children, with their longer remaining lifespans, are at greater risk of developing them.

A January 1984 survey, conducted under contract from EPA, found that asbestos-containing friable materials are present in nearly one-third of U.S. schools (31,000 schools nationwide), with approximately 15 million children enrolled at those schools; and the cost of abatement of these hazards could be as high as $3 billion. In fact, a recent study by the U.S. General Accounting Office (GAO), published in March of this year, found that one-half of the schools surveyed contained some friable asbestos. Much of the asbestos-containing friable material in schools is found in wrapped pipe insulation; this creates a significant health risk to both maintenance personnel and students, since airborne asbestos fibers may travel throughout the entire school building. In addition, friable asbestos is often found in areas of high student exposure -- primarily sprayed or trowelled onto walls and ceilings.

While many state and local school asbestos abatement programs have made significant contributions to the abatement of the hazards, the requisite financial resources for full abatement simply are not available at the state and local levels.

When the Asbestos School Hazard Detection and Control Act of 1980 was enacted, parents were hopeful that some federal financial assistance would be forthcoming to ease the school asbestos problem and the resulting strain on state and local education budgets. No funds were ever requested by the new Administration, or appropriated by Congress. Last year, however, when the authorization for the 1980 Act expired, Congress (thanks to the tireless efforts of Senators Abdnor and Lautenberg and several other members of this Committee) approved the Asbestos School Hazard Abatement Act (Title V, P.L. 98-377), and appropriated $50 million for FY 1984. The ASHAA program also authorizes $50 million for FY 1985 and $100 million for each of the five succeeding fiscal years, but no further appropriations have yet been proposed by the President or agreed to by Congress. The Senate version of the FY 1985 Supplemental Appropriations bill does include $5 million to allow EPA to continue its training and model contractor certification programs, and the National PTA hopes that the members of this Committee will urge the Senate Conferees on the Supplemental to accept this provision, and will urge the Senate Appropriations Committee to appropriate the additional $100 million authorized for FY 1986.

The ASHAA program provides interest-free loans to LEAs for up to 100% of the cost of school asbestos hazard abatement, and/or grants to LEAs for up to 50% of the abatement cost. The National PTA commends EPA for its speedy and effective implementation of this program. EPA developed and initiated an application process in less than four months after enactment, and awarded loans and grants to LEAs less than six months later.

To distinguish among degrees of hazard, EPA created a hazard ranking system which involves three stages of ranking. The first stage, conducted by the governors, places applicants into one of six hazard groups, depending on the seriousness of the hazard as measured by: the degree of damage to the asbestos-containing friable materials, whether or not the materials are exposed, and whether or not the materials are located in an "air plenum" (a forced air stream, as between a dropped ceiling and the floor above). EPA then ranked the applicants within each hazard group according to "exposure hours" (the number of students and others exposed multiplied by the hours of exposure per week). Finally, decisions regarding financial need were based upon the cost of the abatement project(s) minus the amount EPA determined that the LEAs could pay for abatement. The "ability to pay" factor was determined by the per capita income of the school district (for public school applicants) or per pupil operating budget (for private school applicants). EPA then funded as many projects as it could with the money appropriated (although the total cost of the projects requested was more than ten times greater than the amount available for ASHAA loans and grants).

The National PTA applauds EPA's implementation of the ASHAA program. The only problems that have arisen in this first award-year have been caused by circumstances clearly beyond EPA's control. As a result of the severe time constraints surrrounding this year's application process, many school districts were unable to complete the applications (which were rather detailed and time-consuming) before the deadline. Further, the amount of funds available for ASHAA loan and grant awards was woefully inadequate to meet the needs of even those LEAs in the first (greatest) hazard category, but we hope that Congress will solve that problem by agreeing to further ASHAA appropriations for FY 1985 and FY 1986. Lastly, the use of different "ability to pay" standards for public and private schools could have caused some inequity, but we have been assured by an EPA official that: 1) the reason for EPA's not using the "per capita income" measure for both public and private school applicants was that private schools could not have gathered that information in such a short period of time, and 2) EPA will consider modifications to its financial need analysis prior to the FY 1986 award year.

The ASHAA program, in addition to providing funds for school asbestos abatement, has also had the effect of providing schools (at least, those schools fortunate enough to be recipients of ASHAA assistance) with some standards by which to judge the extent of the asbestos hazard, and some requirements regarding the way in which abatement activities are to be performed. However, for those LEAs not fortunate enough to have applied for and received ASHAA grants, there are no requirements for abatement, and no standards for the abatement projects conducted.

Since March of 1971, when EPA listed asbestos as a hazardous air pollutant under the Clean Air Act, EPA has struggled with a regulatory approach to the asbestos problem. Other federal agencies have attempted to regulate exposure to asbestos as well. For example, the Occupational Safety and Health Administration (OSHA) set an occupational exposure standard in June of 1972 (5 fibers per cubic centimeter), which was subsequently lowered to 2 fibers per cubic centimeter. Many experts believe that even the lower standard is much too high an exposure level; and most public employees were not covered by OSHA standards until two weeks ago.

Later EPA actions with regard to asbestos included a 1973 ban on the spraying of asbestos-containing insulation on buildings, and a 1978 extension of that ban to other construction uses. However, the first EPA effort to address the problem of asbestos in schools was in March of 1979, when the Agency initiated its voluntary Technical Assistance Program (TAP). Through TAP, EPA published and distributed several documents to help schools in identifying and abating asbestos hazards. These documents provided schools with needed guidance, including useful information on proper sampling methods for materials suspected of containing asbestos, on selecting a laboratory to analyze the samples, on appropriate laboratory analytical techniques, and on necessary recordkeeping.

Although TAP assisted schools already committed to inspecting and testing for friable asbestos, it did not provide the needed incentive for the vast majority of schools to undertake such programs. Thus, in September of 1980, EPA published the first of a planned two-part proposed rule to be promulgated pursuant to the Toxic Substances Control Act (TSCA). The first part would have required identification of asbestos hazards in the schools and notification of parents and employees regarding any asbestos hazards found, and the second part would have required abatement of school asbestos hazards. In 1981, when the new Administration took office, publication of the final rule version of the first part was postponed, and the second part of the rule was deemed inappropriate federal interference and was permanently shelved.

The final Asbestos in Schools Identification and Notification Rule was published in May of 1982 (almost identical to the proposed rule published nearly two years earlier). The Rule stipulated that, by June 28, 1983, schools were required to have:

1) inspected all school buildings for friable materials,
2) sampled all friable materials (at least 3 samples per area),
3) analyzed samples using polarized light microscopy,
4) notified employees and parents if asbestos were found, and
5) kept records at the school district.

The January 1984 survey to evaluate the effects of the Rule found widespread noncompliance among schools. In spite of EPA claims of success, the survey showed that less than 10% of all Local

Education Agencies (LEAs) had complied with all aspects of the Rule. In fact, by the time of the survey, over 66% of the LEAs had not even complied with most aspects of the Rule. (To have complied with most aspects of the Rule, a school need not have used the designated sampling and analysis techniques or the specified EPA forms for employee and parent notification and for recordkeeping.) Further, nearly 79% of the LEAs (that had completed inspections) with at least one school with asbestos-containing friable materials did not comply with most aspects of the Rule by January of 1984. Of particular concern to the National PTA is the finding that over 25% of the schools with asbestos-containing friable materials did not notify parents.

The inadequacies of the Rule as a means of ensuring that all hazardous asbestos is identified are still more apparent when the Rule is viewed in conjunction with the fact that, although many inspections were conducted by school officials untrained in asbestos hazard identification, nearly 69% of the LEAs did not use the TAP. Hence, even those LEAs which are nominally "in compliance" may not have correctly assessed the full extent of the asbestos hazards in their schools.

Finally, the Rule did not include either a requirement for abatement of asbestos hazards or a standard for abatement projects. Although EPA claims that the Rule has resulted in massive abatement efforts, the survey found that 28% of LEAs with asbestos-containing friable materials in one or more schools were using "special operations and maintenance" procedures and periodic reassessment as the sole method of abatement, rather than removal, enclosure (airtight walls and ceilings around the asbestos), or ecapsulation (sealant sprayed around asbestos material). Ironically, the Identification and Notification Rule had the effect of compelling abatement only in those school districts which had not complied with the Rule, since EPA waived the payment of fines by LEAs that agreed to use the money, instead, for asbestos hazard abatement.

Further, a poll of the EPA Regional Asbestos Coordinators, conducted by EPA, indicated that less than 25% of all abatement projects were performed in accordance with EPA guidance documents. At best, this means that schools have not fully abated the asbestos hazard; at worst, this means that schools' abatement efforts, in some cases, could have made the asbestos hazard more serious. The March 1985 GAO Report confirms that, while local officials overwhelmingly support their abatement actions as having been appropriate, state and federal officials are considerably more skeptical.

For the reasons I have outlined, the National PTA urges this Committee to approve legislation to mandate that EPA:

1) set a procedural standard (based upon existing guidance documents and ASHAA ranking systems) for schools to determine whether an asbestos hazard exists*;

* Some groups advocate the development of an "ambient" air standard (__ fibers per c.c.), but others say that the nature of asbestos makes it scientifically impossible to develop such a standard; that is why we are recommending that a procedural standard be developed, which would specify the manner in which schools should inspect for, test, evaluate, and abate asbestos hazards.

2) require abatement of school asbestos hazards;
3) require certification of contractors and consultants (possibly through state-administered programs) so that they will be adequately trained and will perform effective identification and abatement work; and
4) require periodic re-inspection and notification.

These provisions, together with adequate federal inspection and enforcement, further ASHAA appropriations, and continued improvement in TAP documents and training programs, as well as, perhaps, some additional means of promoting the availability of contractor insurance, should ensure major progress towards the abatement of school asbestos hazards.

Mr. Chairman, the Environmental Protection Agency has exhibited awareness of the hazardous nature of asbestos for over 14 years, and of the dangers of asbestos in schools for over 6 years. How much longer must we wait before EPA will do more than merely exhibit awareness of the problem? Awareness is a crucial first step, but how many more surveys of the problem are needed before EPA will recognize that an inspection and notification rule, without further rulemaking requiring effective abatement of all asbestos hazards, can not assure parents that schools will abate the asbestos that may kill their children?

The National PTA, viewing EPA's continued failure to respond adequately to this problem, urges Congress to immediately enact legislation, as described above, to help make this nation's schools as healthful for the children's bodies as they are for the children's minds.

I commend the Chairman and members of this Committee for your concern about asbestos in the schools, and I thank you, again, for this opportunity to share the views of the National PTA on this crucial matter.

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August 21, 1985

Mr. Ron Ooten
Committee on Environment
 and Public Works
U.S. Senate
Washington, D.C. 20510

Dear Ron:

Enclosed please find the responses from Mrs. Grady (on behalf of the National PTA) to Senator Stafford's questions. We hope that the responses will provide you and the Senator with some ideas for draft legislation.

In addition to EPA's setting procedural standards for schools to follow in addressing the asbestos in schools problem (see answer to question #1), EPA should also: 1) provide adequate Federal inspection and enforcement; 2) continue to improve TAP documents and training programs; 3) conduct research on asbestos risk assessment. Clearly, any legislation by Congress to "encourage" EPA to do the above would be greatly appreciated.

Further, the National PTA hopes that Congress will take action to resolve the increasing shortage of liability insurance available for asbestos abatement contractors. While the creation of standards for abatement may ameliorate the situation to some extent, Federal legislation may be needed to further promote liability insurance availability. The Stafford/Bentsen CERCLA Amendment No. 225 (printed in the Congressional Record of May 23, 1985), relating to pollution liability and risk retention, may serve as an appropriate mechanism through which Congress could deal with this issue.

Thank you for this opportunity for us to share with you our views, and thank you for all of your efforts on the asbestos in schools problem. Please feel free to contact us if you require any additional information.

Sincerely yours,

Miriam Rosenberg,
Governmental Relations Specialist

MR:yb

Encl.

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ANSWERS FROM MRS. LAVERNE GRADY TO QUESTIONS OF SENATOR STAFFORD

1. EPA takes the position that it is not possible, for technical reasons, to set an ambient air standard for asbestos in order to identify which buildings already are unsafe. What kinds of abatement standards and requirements do you think the Agency should establish?

Answer:

If it is not possible, for technical reasons, to set an ambient air standard for asbestos, to identify those buildings in which there is an asbestos hazard, then the National PTA recommends that Congress require that EPA establish procedural standards (based upon existing guidance documents and ASHAA ranking systems) for schools to determine whether an asbestos hazard exists. These procedural standards should require that schools:

1) hire an independent consultant who is qualified (certified through a state-administered certification program) to properly inspect for and sample those friable materials which may contain asbestos;

2) ensure that samples are analyzed by a qualified laboratory using an acceptable method (such as polarized light microscopy);

3) receive from the consultant a report on whether there is an asbestos hazard present (from the consultant's application of a hazard evaluation system based upon EPA's guidance documents and ASHAA materials, including an assessment of the extent of student and employee exposure to a quantity of asbestos-containing materials that are damaged, exposed, and/or in an air plenum), and, if there is an asbestos hazard present, which abatement method (removal, encapsulation, or enclosure) is most appropriate (again, from the consultant's application of information in EPA's guidance materials);

4) notify parents and employees regarding any abestos hazard present and any steps that have been and will be taken to abate the hazard;

5) (if any asbestos hazard is present) hire an asbestos abatement contractor that is qualified (certified, as in the case of consultants, through a state-administered certification program) to properly abate any asbestos hazard found, either using the method recommended by the consultant, or using another appropriate method (while providing a written explanation to parents and employees regarding the reason for the selection of another method);

6) perform post-abatement air quality tests (similar to those required in New Jersey) to ensure that airborne asbestos fibers are not still present in clearly unsafe levels (levels above a set standard);

7) (if asbestos-containing materials were found, but removal was not necessary) periodically re-inspect, following the procedures above.

2. Some critics of the school asbestos grant and loan program argue that it may actually slow down cleanup because it encourages schools to wait for a possible loan or grant rather than going ahead on their own. Do you think that happens? Do you think the Federal support is really necessary?

Answer:

The National PTA does not believe that the ASHAA program encourages schools to wait for a possible loan or grant rather than going ahead on their own. In fact, schools can go ahead on their own and still be eligible for federal ASHAA funding, as long as the abatement projects were not completed before January 1, 1984. Further, there is such a small amount of Federal funding authorized (and even less appropriated) for the program relative to the national need (estimated at $3 billion), that the chances of any one school getting significant Federal assistance is small. Finally, most schools would be only eligible to receive loans (which must be repaid within 20 years) and not grants, and, in addition, even those schools fortunate enough to have received some federal assistance have not generally received assistance to cover the full cost of abatement. All of these factors would tend to discourage schools from waiting for a possible ASHAA award.

If any schools are delaying the commencement of necessary abatement projects, they are probably waiting because they do not have sufficient funds or sufficient guidance as to what constitutes an asbestos hazard, not because they prefer to wait for ASHAA funds for such projects. It is because of the widespread lack of sufficient funds that increased Federal financial support of the ASHAA program is so essential. While many state and local governments have made a considerable effort towards addressing the asbestos in schools problem, Federal assistance is needed to bridge the gap between that which state and local goverments can do and that which must be done to protect our children from asbestos-related cancer and disease.

LEGISLATIVE INFORMATION

TESTIMONY OF THE
NATIONAL EDUCATION ASSOCIATION
ON THE
ASBESTOS SCHOOL HAZARD ABATEMENT ACT (ASHAA)
BEFORE THE
ENVIRONMENT AND PUBLIC WORKS COMMITTEE
U.S. SENATE

PRESENTED BY

LINDA TARR-WHELAN

DIRECTOR OF GOVERNMENT RELATIONS

JULY 12, 1985

MARY HATWOOD FUTRELL, President • KEITH GEIGER, Vice President • ROXANNE E. BRADSHAW, Secretary-Treasurer
DON CAMERON, Executive Director
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Mr. Chairman and Members of the Committee:

My name is Linda Tarr-Whelan. I am Director of Government Relations for the 1.7 million member National Education Association (NEA). NEA members are this nation's public school teachers, educational support personnel, and higher education faculty. NEA is pleased to have this opportunity to testify today on implementation of the Asbestos School Hazard Abatement Act (ASHAA), and on the problem of asbestos in schools in general.

NEA applauds the role of the Senate and, in particular this Committee, in taking the lead for originating and passing the ASHAA last year.

ASHAA -- The Promise And The Reality

NEA appreciates of the Senate role in approving an initial $50 million funding for ASHAA in FY84. But as you know, Mr. Chairman, even conservative estimates of the total cost of asbestos clean-up in the schools range upward of $3 billion. We therefore urge the Senate to continue its leadership in providing federal assistance for the clean-up effort by approving the full $100 million in ASHAA appropriations for FY 1986.

NEA comes before you today also urging that you mandate that the Environmental Protection Agency (EPA) promulgate regulations that would establish uniform federal standards by which all schools and institutions of higher education would assess the degree of asbestos hazard and require them to take measures to effectively and permanently abate those problems.

As you may know, Mr. Chairman, NEA was actively involved with the Congress in drafting ASHAA last year. Our work on this vital piece of federal legislation was only one part of our longstanding concern with, and involvement in, the resolution of the serious public health problem posed by the presence of friable asbestos in the schools. NEA has joined the efforts of many in the Congress to help raise the level of public awareness about this serious public health and environmental problem. We have worked in coalition with many other concerned organizations, including school administrators, parents, and other labor groups, in soliciting a timely response from federal officials and agencies. (Attached please find the NEA policy statement on asbestos as adopted by the 1985 Representative Assembly, NEA's highest policy-making body.)

Most recently we have published ''Asbestos in Our Schools,'' a handbook for the 12,000 NEA local affiliates to help them work with their local school districts. I have provided copies of this handbook to the Committee. In addition, we are conducting a survey through our local affiliates to determine the extent of the asbestos hazard in our schools. NEA also has worked with Members of Congress for passage of and funding for the ASHAA. We regard our involvement as imperative, and express regret only that a lasting solution with adequate national resources has not already been found.

Federal Abatement Assistance A Must

The clean-up of toxic waste sites is considered enough of a national priority for the federal government to have established a federal ``Superfund'' administered by the EPA. Why shouldn't the clean-up of school asbestos, which presents health hazards to millions of students and school personnel, be afforded comparable national attention and resources?

Clearly, the costs of making all our schools safe from asbestos are enormous. Estimates from the Education Department and the EPA range into the billions of dollars. But the cost in lives could be staggering. States and local school districts are not capable of bearing this burden alone. Adequate federal funding for this clean-up <u>must</u> be given top priority by the Congress.

Even if ASHAA were funded to its full authorization of $600 million over a seven year period, only a fraction of the Education Department estimate of $3 billion in total clean-up costs for the schools would be covered. The $50 million appropriated for FY84 under ASHAA -- of which only $45 million was used for actual clean-up costs, with $5 million kept for administrative costs by EPA -- was long overdue and woefully insufficient. To date 4,800 schools have requested a total of $530 million to help with asbestos abatement. With the $45 million appropriated for FY84, only 341 schools received awards to carry out their clean-up work.

Yet, despite these obvious inadequacies, the Senate Appropriations Committee recommended only $5 million for FY85, rather than the $50 million that is authorized. And it is to be used specifically for contractor training and certification. The House HUD-Independent Agencies Appropriation Subcommittee for the first time included ASHAA funding in its bill for FY86, but approved only $50 million, rather than the $100 million authorization level.

This is why, Mr. Chairman and Members of the Committee, it is so important that the Senate approve the full $100 million in funds for ASHAA for FY86.

NEA supports full funding of ASHAA because schools receiving ASHAA funds must follow EPA procedures for determining contractor qualifications, for evaluating asbestos hazards and appropriate abatement actions, for advising and protecting school employees performing abatement projects, and for disposal of removed asbestos-containing materials.

Mr. Chairman, EPA has sent a document to all local education agencies providing guidelines to be followed in each of these areas by schools awarded ASHAA funds. This document was expanded and revised last month. NEA believes that in its implementation of ASHAA and its setting forth of the required standards, EPA has carried out Congressional intent. While we are hopeful that the June guidance document will provide additional useful advice to schools, we are generally satisfied with EPA progress on this particular issue.

Another important element which underscores the need for adequate funding for ASHAA is EPA's stated intention to condition ASHAA awards to schools on the selection of a contractor meeting EPA's qualifications. We feel that schools performing abatement work with ASHAA funds will therefore carry out appropriate and safe abatement activities.

ASHAA: Schools Need Longer Application Period

Mr. Chairman, schools applying for the $45 million in appropriated ASHAA funds for this fiscal year had only two months to complete a fairly long and complex application. Part of the application time fell over the Christmas holidays. NEA would suggest that for FY86, local schools applying for ASHAA funds be given a longer turnaround time between distribution of the applications and required return date.

Public - Private Schools Must Be Held to Same Financial Standards

NEA believes it imperative that our public and private schools be held to the same financial standards. Currently, different standards are used in determining financial need. In a public school district, per capita income is the measure, while the school operating budget per pupil is utilized in private schools.

Clarifying and uniformly applying the same standards will help to make ASHAA fairer and more effective.

Asbestos: Why the Concern?

For at least 10 years, health experts, government officials, and the media have known that crumbling or friable asbestos that releases loose fibers into the air can cause illness and even lead to death. Before the dangers associated with asbestos became public, thousands of school buildings had been constructed or renovated using asbestos-containing materials. Builders considered these materials top-notch for their fireproofing and electrical, thermal, and acoustical insulating properties.

However, medical research has proven that, once inhaled, asbestos fibers may remain in the lungs indefinitely and can lead to various life-threatening diseases, including asbestosis, lung cancer, and mesothelioma.

As we know from data collected by the EPA, asbestos hazards are present in more than 31,000 school buildings across the country. Some 15 million students and 1.4 million school employees are being exposed to these hazardous materials. However, because of incomplete data from schools, tens of thousands more school buildings may have asbestos, which could mean that hundreds of thousands of other students and school personnel are now being exposed. A March 1985 Government Accounting Office (GAO) sample of 36 school districts found that more than 50 percent of their 4,062 school buildings have had friable asbestos. While some have abated the problems, more than 1,400 schools still had friable asbestos as of October 30,1984.

Children at Greater Risk from Asbestos

The health hazards caused by asbestos in the schools are particularly serious since children who are exposed are more likely to develop cancer than are similarly exposed adults. Because they tend to be more active than adults, children inhale and exhale more often, and, since they often breathe through their mouths, they circumvent the body's normal nasal filtering system. Therefore, children are particularly likely to inhale greater amounts of asbestos fibers.

Children's higher rates of metabolism and cell development also may increase their risk of developing an asbestos-related disease. Furthermore, since children have a greater remaining life span than adults, they are more likely to develop such diseases during their lifetimes. The net effect of these facts spells real danger: since most asbestos-related diseases take 15 to 40 years to manifest themselves, childhood exposure to asbestos can result in an adult being stricken in the prime of life.

While some have questioned whether asbestos exposure at low levels is actually harmful and whether certain types of asbestos present a health hazard at all, NEA believes the scientific evidence dispels these notions. For example, a 1984 National Academy of Sciences (NAS) report, ''Asbestiform Fibers: Nonoccupational Health Risks,'' recognized the risk to the general population from low-level nonoccupational exposures.

According to EPA, for nonoccupational populations, such as school children, the greatest concern is from ''peak'' exposures that may occur where friable asbestos has been disturbed. Such exposure may overwhelm biological systems that ordinarily protect the body from asbestos.

Lastly, the NAS report found that all major commercial types of asbestos fibers have been associated with lung cancer, mesothelioma, and asbestosis, and therefore, all types should be considered equivalent in potency.

Haltingly, Action Begins on Ending the Hazards

As the health dangers of asbestos became clearer throughout the decade of the 1970s, the EPA began to take action. In 1973, it issued regulations under the National Emission Standards for

Hazardous Air Pollutants (NESHAPS) that banned the use of spray-applied asbestos-containing materials for fireproofing or insulating purposes. In 1975, the ban was amended to include all methods of asbestos application. In 1976, the ban was further broadened to prohibit all uses of asbestos in buildings.

In 1979, EPA set up a technical assistance program to encourage schools to voluntarily identify and remove asbestos hazards. It also initiated formal rulemaking on asbestos in the schools that same year. Subsequently, EPA issued final rules requiring that by June 28, 1983, all public and private elementary and secondary schools inspect for asbestos, analyze any friable materials, and notify school employees and students' parents of the presence of any friable asbestos found.

Unfortunately, EPA has refused to issue regulations establishing clear standards for determining the hazard of asbestos and requiring abatement. This means that schools are required only to inspect for dangerous asbestos materials; removal or abatement is still totally voluntary.

A November, 1983 memo from EPA's Regional Asbestos Coordinator in Region VII stated that ''At best, (EPA's inspection) rule is a dismal failure...Schools were not required to report anything to EPA making it impossible to even prioritize inspection targets.'' The memo further noted, ``A school can be in total Rule compliance and a hazardous exposure situation can still exist because the Rule requires no corrective action.''

EPA Guidelines a Must

We therefore urge that you require promulgation of regulations by the Environmental Protection Agency (EPA) to establish uniform federal standards by which all elementary and secondary schools and institutions of higher education would assess their asbestos hazards and take measures to effectively and permanently abate those problems.

For a number of reasons, NEA believes these federal regulations are imperative. While many school districts are moving ahead on the abatement of the asbestos problem, many others underestimate the extent of the problem. In other districts, abatement procedures are inadequate and therefore hazardous to school children, teachers, and school personnel, and to those involved in the abatement procedures. Moreover, NEA believes that there must be uniform standards governing abatement procedures throughout the country. As mentioned previously, 341 schools were awarded a total of $45 million in ASHAA funds to help in asbestos abatement. In general, these funds are going to the schools with the worst problems and the least ability to pay. These schools are required to comply with guidelines established under EPA's Technical Assistance Program and must have a contractor who meets EPA requirements. However, the thousands of schools not eligible for, or not receiving federal funds, are not required to meet these same guidelines.

The only EPA requirement that applies to all schools is the inspection rule. But even here, there is no requirement for a reinspection of schools where asbestos has been found and corrective measures have not been taken. Likewise, there is no requirement that schools notify EPA of their abatement work. Higher education institutions are not covered at all. These are concerns, NEA believes, that must be addressed immediately, and can be addressed most efficiently and effectively through the issuance of EPA guidelines.

''Cost-Benefit'' Mindset Must Be Altered

Mr. Chairman and Members of the Committee, it is particularly fitting that you are holding these oversight hearings now. Office of Management and Budget (OMB) tactics to place a dollar value on children's lives, and compare that value to the cost of clean-up is nothing short of scandalous, and it must be countered. NEA believes it imperative that the OMB mindset with regard to requiring ``cost-effective''measures to preserve the value of human life must be fundamentally questioned and ultimately rejected. The April 17, 1985 Philadelphia Inquirer article, ''Budget Office Called Insensitive to Asbestos Plan,'' by Dale Mezyhcappa, revealed the OMB view as presented in testimony before the House Energy and Commerce Committee:

> Because a young person who is exposed to a dangerous level of asbestos is likely to live 30 or 40 years before the potentially fatal effects are evident the ''current value''of his life should be lowered because of the lengthy intent period.
>
> Such a system would place a value of $22,000 on the life of an exposed young person and would practically preclude any federal regulation of asbestos because the real cost of regulation would invariably be higher (emphasis added).

Such a callous disregard for human life by our government officials is unconscionable. NEA believes that such ''cost-benefit analysis'' cannot be the ruling standard in the determination of whether to apply federal guidelines with regard to a problem that by EPA's own admission is a major public health hazard.

High-ranking officials within the Agency have called for stringent action. John Moore, Assistant Administrator for Pesticides and Toxic Substances, recommended in a November 7, 1984 memo to Alvin Alm, Deputy Administrator of the EPA, that the Agency issue:

- * an immediately effective rule under section 6(d)(2) of TSCA (The Toxic Substances Control Act) which would require that abatement workers follow certain procedures and work practices to limit their exposure to asbestos during abatement activities;
- * a rule requiring periodic reinspection and reporting for friable asbestos-containing materials in schools; and,
- * a requirement that if friable asbestos is found, schools develop and implement an abatement plan.

Moore also suggested that the rule could be proposed by August, 1985. Unfortunately, on November 30, 1984 EPA, officially announced that it would not issue these rules.

In addition, Roger Wilmoth, Acting Chief of the Nonferrous Metals and Minerals Branch of the Industrial Environmental Research Laboratory of the EPA, stated in an internal memo in March, 1984:

> I feel asbestos is the pollutant of the century. Because of past exposures, an estimated 10,000 persons will die each year until the year 2000 from asbestos-related illnesses. Virtually nothing we do now will save these 200,000 people who have already been exposed. They will die horrible deaths from mesothelioma, lung cancer, asbestosis, and/or gastrointestinal cancers. New exposures must be adequately addressed.

We must act, and we must act quickly if we are to prevent this public health crisis from harming even more innocent victims. To adequately address the asbestos problem, NEA believes that federal guidelines must:

* require all schools with hazardous asbestos to take appropriate abatement actions;

* require use of certified contractors;

* establish building occupant safeguards during asbestos abatement;

* establish procedures for disposal of removed asbestos; and,

* require periodic reinspection where asbestos is not permanently removed, but is encapsulated or enclosed.

I note that EPA has recently stated it will apply OSHA asbestos standards for worker exposure to all public employees. While this is a step in the right direction, it in no way negates the need for the additional rules we call for. In addition, the OSHA standard of 2 fibers/cc is very loose. By comparison, the New Jersey standard is 0.1 fibers/cc, two hundred times lower.

Despite the fact that the EPA claims that its voluntary program of asbestos abatement is working, a look at what states and local school districts have been able to accomplish shows another dimension of the problem.

States and Localities Begin Clean-Up -- First Steps Only

NEA believes that local school district officials have the best interests of their students and personnel at heart when it comes to the treatment of friable asbestos in school buildings. By June 1983, some 83 percent of local school districts had completed inspections. However, it is clear that many of these officials have not moved ahead on abating the asbestos problem as swiftly or permanently as possible. For example, according to an October 1984 EPA study, ''Evaluation of the EPA Asbestos-In-Schools Identification and Notifcation Rule,'' in only 44 percent of schools where inspection revealed some form of friable asbestos had abatement work been completed. By January, 1984, only eleven percent of all local school districts were in complete compliance with EPA's asbestos inspection rule. Of those school districts with friable asbestos present, only four percent reported compliance with all aspects of the ruling.

I should note that the EPA evaluation study pointed out visible weaknesses in compliance efforts. For example, the study noted that a follow-up survey to the initial sampling of school districts showed that nearly all the information previously gathered was consistent with their later survey, except for one variable, the number of schools with friable materials. The study stated:

> One reason for this disparity is that schools do not know whether to report friable materials which have been encapsulated or enclosed. It was also discovered that LEAs missed friable materials in 25 out of 90 schools previously inspected by LEAs and the majority (in 20 of the 25 schools) of overlooked friable materials was limited to boiler rooms. This suggests that LEAs do not realize that boiler rooms require inspection. This finding also indicates that the survey estimate of the number of schools with asbestos-containing materials (AFCM) may be an underestimate.

With further regard to compliance with the EPA ruling on asbestos abatement, the GAO study, ''District Officials Face Problems In Dealing With Asbestos In Their Schools,'' noted that of the 29 school districts responding about the types of abatement actions completed, 16 had removed the asbestos-containing materials. The study went on to state that while school districts believed ''the most appropriate abatement actions (i.e., removal, encapsulation, enclosure, or special operations and maintenance) were taken in the majority of cases,'' EPA and state officials did not always agree. The study went on:

> School district officials believe that 90 percent of the actions taken were the most appropriate. State officials believe that 54 percent of the actions were most appropriate, that 8 percent were not the most appropriate, and that they had no basis to judge 38 percent of the actions. EPA oficials believe that 13 percent were not the most appropriate, and that they had no basis to judge 59 percent of the actions.

In addition, the GAO study noted that while school district officials believed abatement work had been adequately performed, EPA and state officials were generally less satisfied with its adequacy. Some school district officials stated as well that they believed that their past actions dealing with asbestos, most often encapsulation, had not been the most appropriate. This means that future expenditures will be needed by these districts to fully rectify the problem.

Conclusion

Mr. Chairman and Members of the Committee, clearly the problems of asbestos abatement in our elementary and secondary schools and institutions of higher learning require federal leadership and adequate federal funding. While voluntary efforts in local school districts are to be lauded, they are clearly not enough to permanently dispose of the problem.

Swift Congressional action directing the EPA to promulgate federal regulations governing the clean-up of our schools and adequate federal funding to help our schools rapidly resolve the problem are two key elements in ending this public health and environmental menace.

The magnitude of this life-threatening problem requires a joint effort by this Congress, the EPA, state and local officials, and the education and medical communities. Children's lives are at stake.

Thank you.

ATTACHMENT

NEA POLICY ON ASBESTOS ABATEMENT

AS ADOPTED BY THE

JULY, 1985

NEA REPRESENTATIVE ASSEMBLY

ASBESTOS ABATEMENT

NEA supports federal assistance to remove or contain friable asbestos which threatens health and safety in the public schools. Therefore, NEA supports immediate abatement through development of funding mechanisms for grants and/or loans for school districts. NEA supports sufficient training and proper protection for school personnel or others charged with identifying and/or removing friable asbestos. NEA supports provision of a program to financially protect individuals damaged by asbestos.

GOVERNMENT RELATIONS
Linda Tarr-Whelan, Director

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July 31, 1985

The Honorable Robert T. Stafford
Chairman
Committee on Environment
and Public Works
410 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Stafford:

Enclosed are my responses to the questions on asbestos which you sent on July 18. I once again want to thank you for your leadership efforts on this important issue, and look forward to working with you and your staff on developing legislation to resolve this problem.

Sincerely,

Linda Tarr-Whelan

Linda Tarr-Whelan
Director of Government Relations

LT-W/par

Enclosure

RESPONSE TO QUESTIONS FROM SENATOR STAFFORD

1. Q. EPA takes the position that it is not possible, for technical reasons, to set an ambient air standard for asbestos in order to identify which buildings already are unsafe. What kinds of abatement standards and requirements do you think the Agency should establish?

A. NEA believes that, if it is not possible to set an ambient air standard to establish when asbestos is hazardous, a set of procedural standards, coupled with a target post-abatement air level, should be set.

Such standards should include the following:

-use of a trained expert (perhaps certified at the state level) to inspect the building for possible asbestos;

-use of a certified laboratory to analyze friable material suspected of containing asbestos;

-in conjunction with the above, some type of imminent hazard standard that would require immediate removal when asbestos clearly poses a health hazard, i.e.- when it has already crumbled and fallen or has been distributed through the schools building's ventilation system;

-a requirement that once a school determines that it has hazardous asbestos, based on the findings of the expert consultant and the lab analysis, it follow EPA regulations for abatement; EPA's guidance document would in effect be converted to required rules for dealing with enclosure, encapsulation, or removal of the asbestos;

-certified contractors, again perhaps certified at the state level, must be required;

-to ensure that any abatement work results in a reduction of asbestos air levels, there should also be a post-abatement air standard to certify that the building is now safe for occupancy;

-all of the above should be coupled with a reinspection requirement when asbestos is not permanently removed, but is enclosed or encapsulated;

-safe disposal of any removed asbestos should be required.

2. Q. Some critics of the school asbestos grant and loan program argue that it may actually slow down cleanup because it encourages schools to wait for a possible loan or grant rather than going ahead on their own.

Do you think that happens? Do you think the federal support is really necessary?

A. NEA disagrees that this is happening. Because the ASHAA program relies primarily on loans (grants go only to school districts with severe financial need, and even in these cases, the grant/loan combination generally does not pay for the full cost of the abatement project), schools would be unlikely to delay any abatement work in the hopes of getting federal funds.

Furthermore, projects that have been completed since January 1, 1984 are eligible for ASHAA funds, so again there is no incentive for schools to delay the abatement procedures.

NEA strongly believes federal funding is vital. Estimates of total cost to clean up this problem in all schools range as high as $3 billion. School district budgets are already being stretched thin as they respond to the various educational excellence reforms. While states can help pay part of the cost for asbestos removal, the federal government must play a key role in providing assistance. We view this program as comparable to federal efforts in Superfund and other environmental areas.

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INTERNATIONAL PRESIDENT

RICHARD W. CORDTZ
INTERNATIONAL SECRETARY-TREASURER

TESTIMONY OF THE

SERVICE EMPLOYEES INTERNATIONAL UNION, AFL-CIO, CLC

BEFORE

THE HONORABLE ROBERT STAFFORD
CHAIR

COMMITTEE ON ENVIRONMENT & PUBLIC WORKS
U.S. SENATE

"EPA Asbestos Program & Asbestos School Hazard Abatement Act"

July 12, 1985

SUBMITTED BY:

Geri D. Palast
Legislative Director
Service Employees International Union, AFL-CIO, CLC

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My name is Geri Palast and I am Legislative Director of the Service Employees International Union (SEIU). Our union represents nearly 900,000 of America's service industry workers, including 100,000 school workers. Most of our members work in schools, hospitals and other public and commercial buildings — in structures that are the heart of American life, but laced throughout with a substance that imperils it.

The hazards posed by friable asbestos in schools and other public and commercial buildings is well-documented.

As an EPA research chief has written:

> "...asbestos is the pollutant of the century. Because of past exposures, an estimated 10,000 persons will die each year until the year 2000 from asbestos-related illnesses. Virtually nothing we do now will save these 200,000 people who have already been exposed. They will die horrible deaths from mesothelioma, lung cancer, asbestosis, and/or gastrointestinal cancers. New exposures must be adequately addressed..."[1]

Last year, members of this Committee, notably Chairman Stafford and Senators Abdnor and Moynihan, originated and the Congress passed and funded the Asbestos School Hazard Abatement Act of 1984 (ASHAA). ASHAA went a step further and recognized the need for a federal role in providing a "systematic program for remedying hazardous conditions in schools" and that, in the words of ASHAA, "without a program of information distribution, technical assistance and financial support, many local education agencies and states will not be able to mitigate the potential hazards in their schools."

The authorization of ASHAA at $600 million for grants and loans and technical assistance and start-up funding at $50 million at the close of FY 1984 has been the critical push needed to move the reluctant U.S. Environmental Protection Agency (EPA) to take first steps in using its know-how as an expert agency to develop a workable policy and program which provides schools with proper guidance and direct assistance.

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[1] The document appears as Attachment 1 to this testimony.

NOTE: The attachments referred to throughout this statement have been retained in committee files.

The Committee must both evaluate and assess the implementation of ASHAA and look further into EPA's broader policy, or lack thereof, regarding a "systematic program for remedying hazardous asbestos" for $50 million reaches a regrettably small fraction of schools and does not reach public and commercial buildings.

First, the big picture.

SEIU is currently before a United States District Court asking that Court to order the U.S. Environmental Protection Agency to initiate a rulemaking to require corrective action where hazardous asbestos is present in schools, and to require appropriate action in the hundreds of thousands of other public and commercial buildings that contain friable asbestos materials. We have found that the highest officials of the U.S. EPA have internally concluded that rules sought by SEIU are needed. EPA, however, has inexplicably refused to proceed with these rules. To defend its inaction, it says no rules are needed because its program is working. We have found this claim to be tragically false. EPA's own "best evidence" shows that its program is not merely unsuccessful, but admittedly may be causing more cancer than it prevents.

We are in Court seeking an order that EPA proceed with rulemaking; we are here to help place ASHAA in the context of our examination of EPA's programs, including the examination of many thousands of EPA documents and talks with EPA officials.

EPA agrees with Congress (and SEIU) that asbestos in schools and other buildings is a serious hazard requiring corrective action. EPA also agrees that schools and other public and commercial buildings should (1) inspect for friable asbestos; (2) take appropriate action to abate hazard; (3) periodically reinspect until all hazard is removed. EPA does not dispute that these steps should be taken, for indeed, they are spelled out in EPA's "guidance documents." As EPA agrees, where action is taken that is inconsistent with its guidance, money will be not only wasted, but risk may actually be increased.

The question, in brief, is not what action should be taken — all agree action in accord with expert guidance should be followed — but whether any action will be taken, and whether action will be proper.

In enacting ASHAA Congress recognized that existing "guidance" was not always being followed. ASHAA therefore provides for review procedures to assure that abatement actions taken under ASHAA are both appropriate and properly performed. ASHAA will hopefully benefit the fortunate few that know they have a problem and can obtain federal help; it does not assure hazard will be properly addressed in the case of schools who may not even know they have a problem, as well as those who cannot obtain ASHAA funds.

Our inquiry has revealed that much action to date has been improper, and indeed, may have made matters worse. The best evidence available shows that existing programs have left large categories of risk and have created new ones. ASHAA, as presently administered and funded will not address much of this risk. Congressional attention is needed to assure that the proper action required of schools who receive ASHAA funds is not denied students, teachers and workers in schools who do not directly benefit from ASHAA.

First, an extraordinarily large number of schools have not complied with EPA's inspection rule. In particular, it appears that there has been substantial neglect of boiler room hazard.

The compliance date for EPA's inspection rule was June 1983. A January 1984 EPA contractor survey found that two-thirds of LEAs were not even in compliance with "most" of the rule. EPA's compliance monitors have continually found violation rates in excess of 50%. Obviously, these levels of violation rates are unsatisfactory. As an EPA internal memo put it:

> "If noncompliance rate doesn't drop below 15 percent, too many LEAs will be in violation hence too many children still at risk."[2]

EPA's baseline estimates of the school population at risk - slightly over 30,000 - come from a 1984 telephone survey performed by a contractor.[3] The contractor sought to verify the telephone information by visiting 90 schools. In 25 cases it found that schools failed to report all friable materials, and in 20 of these cases the unreported materials were in boiler rooms. As the contractor put it, "This suggests that LEAs do not realize boiler rooms require inspection."

While the contractor made plain that this finding shows the 30,000 school estimates to be an underestimate, neither the contractor nor EPA undertook to adjust the estimate to reflect widespread boiler room underreporting.

In our court discovery we found that the contractor's finding of boiler room neglect was strongly and independently confirmed by EPA's own field staff. For example, EPA's New England Regional Asbestos Coordinator told EPA in early 1984:

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[2] Attachment 2 to this testimony.

[3] Evaluation of the Asbestos-in-Schools Identification and Notification Rule, October, 1984.

> "... in many typical school situations, seriously damaged and deteriorating asbestos is not accessible to children for it is "only in boiler rooms." This common misconception of hazard only to children is in part responsible for noncompliance. Schools do not feel a need to recognize friable asbestos that is not accessible to children. The result is potentially high exposures to some adult employees...
>
> "... compliance monitoring activities in Region I forces one to question any data concerning asbestos in schools that is voluntarily submitted. Forty percent of Region I schools certify to being free of any friable materials, a certification that is not supported by site visits."[4]

Similarly, month after month, the monthly technical assistance report from the Rocky Mountain Region began:

> "The Leas who have been inspected seem to have two problems:
>
> "1. The pipes and boiler rooms at the start of the T.A.P.S. (Technical Assistance Programs) were put on the back burner; this is coming home to haunt us. This is a time bomb awaiting...."[5]

Our members work in the boiler rooms. We know that people who work in the boiler rooms are neglected. We know, as EPA knows, that the "time bomb" of boiler room asbestos wil come back to "haunt" not only our members, but as friable materials filters throughout the schools, teachers, students, and other schoold employees as well.

Second, there is little dispute that a large, but unknown, amount of abatement that has been undertaken has been improper, and may have increased risk.

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[4] Attachment 3 to this testimony.

[5] Attachment 4 to this testimony.

Dr. Robert Sawyer, the principal technical consultant on EPA's initial guidance document, testified before EPA in May 1984 hearings conducted in response to our rulemaking request that:

> "Based upon my observations, the EPA program under the present conditions will cause more adverse health effects, including malignancies, than it can ever prevent."

In our court discovery we found that EPA did nothing to rebut Dr. Sawyer's testimony and can provide no analysis showing that its program has been curing rather than killing.

Indeed, we found that EPA's own "best evidence," a Spring 1984 poll of EPA Regional Asbestos Coordinators ("RACs"), was that less than 25% of abatement was conducted in keeping with EPA guidance. EPA has evidently conducted no successor poll or a more "scientific study."[6]

Third, and as the most important corollary to the above, even where schools are taking action, they are not aware that they are taking improper action which may increase hazard. As the March GAO report found, while state and EPA officials expressed doubt about the adequacy of local abatement actions, local officials generally believed these actions were satisfactory.

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[6] As the March 1985 GAO report summarized: (Emphasis added)

> "We were not able to determine if the school districts selected appropriate actions or if the work done at the school districts were adequately performed. While school district officials were generally satisfied with these decisions and the work performed, and although EPA and state officials were generally not as satisfied, no one really knows whether appropriate actions were selected and whether the work was performed adequately."

"School District Officials Face Problems in With Asbestos in Their Schools," pages 63-64.

In light of the above, the greatest present shortcoming of ASHAA is not so much the limitation in federal funds available, but the absence of any present assurance that schools who cannot obtain ASHAA funds will take "required" action, and, if they do so, will take action that does not waste money and increase harm.

At the present there is (1) no requirement that schools reinspect for asbestos, even though EPA "guidance" "requires" reinspection where hazard remains and many initial inspections did not report all asbestos; (2) no requirement that schools who have taken action, but may have done so improperly and even increased risk, reinspect; (3) no requirement that schools who have found hazard take action (as "required" by EPA's "guidance") to abate it; and (4) no requirement that schools who take action use appropriately certified experts in doing so.

In our rulemaking request of EPA we are asking the Agency to assure that all schools -- and not merely the limited beneficiaries of ASHAA -- be required to follow the expert guidance that EPA is developing under ASHAA. As we have noted, prior to inexplicably denying our request, the highest EPA officials agreed with us. Thus, in a November 7 memo to EPA Deputy Administrator Alm, Dr. John Moore, EPA Assistant Administrator for the Office of Pesticides and Toxic Substances ("OPTS") recommended:

> "OPTS recommends that the Agency issue a rule requiring periodic reinspection for friable asbestos containing materials in schools. If friable asbestos is found, schools would be required to develop and implement an abatement plan. Each school would be required to have an independent asbestos abatement expert inspect and analyze the potential hazard presented by the asbestos according to standards or guidelines developed by EPA under the school assistance program. Contractor certification guidelines would be incorporated. The expert would also work with the school in developing and implementing the abatement plan."[7]

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[7] Attachment 5 to this testimony.

There would seem to be little doubt that Dr. Moore's November 1984 recommendation to Deputy Administrator Alm makes sense.

The Big Picture shows that (1) ASHAA funds will only reach a small fraction of schools with hazard; (2) ASHAA may be creating a two track system. In this two track system (1) schools who receive federal funds are closely monitored to ensure that money is not wasted and abatement done properly; (2) many schools who do not receive federal funds may continue to engage in improper abatement that not only wastes money, but increases risk; and (3) many further schools will not seek ASHAA assistance, or take any other action, because they are under the mistaken belief that they have already taken proper action to identify and abate hazard.

If EPA's "guidance" is not tied into a "requirement" that it be used -- as provided for in the case of ASHAA grant recipients -- there is little doubt that actions (or inaction) in non-ASHAA schools will waste money, may increase risk, and ultimately will create a greater demand for federal assistance.

Finally, we must sadly note that the "schools" problem is only the "tip of the iceberg". While one EPA contractor survey estimated that 30,000 schools contain friable asbestos, a parallel survey estimated that friable asbestos is present in over 700,000 other public and commercial buildings. At present, EPA does not even require inspections in these buildings. In our rulemaking request we asked that EPA extend its school programs to other buildings. In his November 7, 1984 memo Dr. Moore recommended that EPA proceed by rulemaking to develop the data needed to deal with this enormous area. This recommendation, which EPA inexplicably has also yet to follow, remains a quite minimal and reasonable first step.

ASHAA: Operation and Implementation

We turn now to a review of the operation and implementation of ASHAA itself. On balance, ASHAA has meant progress. With a specific Congressional mandate and attendant funding, EPA moved expeditiously to develop an application, ranking system, funding and distribution formula, oversight mechanism and administrative and technical assistance projects including pilot training centers for contractors. Since funding decisions were only recently made public, only a cursory review of the process is possible at this time. I will simply alert the Committee to problems which have been brought to our attention which require "fine tunning" prior to the next application cycle:

1) Provision for reasonable application period and/or extensions for state and local education agencies (LEAs).

It has come to our attention that in some states schools were not given sufficient time to conduct adequate inspection and review to complete applications properly, or, in some cases, at all. In one state, we understand schools had only two weeks to apply. In some cases, schools, were not able to complete inspections and apply for appropriate projects. In other cases, schools were discouraged from applying at all.

2) Compliance with ASHAA Sec. 506 (2) (A) and (B) - Establishment of standards for determing qualifications of contractors and standards for training, equipment, protective clothing and other information which must be supplied to adequately advise and protect school employees utilized to carry out relevant activities.

To the best of our knowledge, no such standards have been promulgated. EPA has simply utilized "guidance" documents. If the EPA complies with the statute here, such standards could be made applicable to all detection and abatement activities, not limited to ASHAA. Compliance with these standards and the recently issued worker protection rule should be included as a necessary prerequiste for participation in the program.

3) Standardization of financial need formula for public and private schools.

Currently, the EPA ranks the financial need of public schools based on per capita income while it ranks private schools on the basis of operating budget per pupil. This skews the ranking in favor of private schools. A different formula must be developed to measure the financial need of the two systems on a more equal basis.

4) Review of ranking and distribution process.

Questions have been raised regarding the ranking and distribution procedures. First, EPA established six priority groupings for applications. EPA determined that there was only enough money to fund about half of Priority 1. Priority 1 is defined as one in which friable asbestos is exposed or in air ducts which lead to public vents. EPA received $100 million in Priority 1 requests or a slightly more than double the amount EPA was able to award. As a result, the Agency was forced to rank Priority 1 projects. To do so, EPA used a formula which evaluated each project by its cost, the population of the school district and the per capita income of district. Unfortunately, the severity of the problem was not a part of the ranking once projects were considered Priority 1.

Additionally, when the number and cost of the Priority 1 projects are considered by state, the EPA formula does not appear to factor in overall state burden of asbestos removal. We raise these issues as possible problems arising from a preliminary review of this process. This procedure requires further study prior to revision.

5) Review of the accuracy of applications as an objective basis on which to make priority rankings.

Questions have also been raised regarding whether EPA was able to complete a thorough analysis of the accuracy of the applications that were received. School officials were asked to make subjective evaluations of their situation. EPA then used this subjective information to rank the projects. Only after the rankings were done did EPA attempt to inspect the sites. Unfortunately, not all Priority 1 and 2 sites were visted. This fact means that many schools may have under or overinflated their evaluation, thus causing them to receive more or less money than they otherwise should have received.

EPA officials have stated that many of the 341 projects that received funds were inspected by regional investigators. We understand that the investigators found "some" projects were overinflated in the application and were downgraded while "some other" projects were underinflated and appropriately upgraded, making them eligible for Priority 1 awards. To our knowledge, there was no compilation of the inspections. As a result, EPA is unable to say whether or not school districts were generally on the mark with their amittedly subjective evaluation of the danger and the cost estimates of each project. We believe that such a compilation of investigation results should be done and that the EPA should develop an application procedure which would elicit more objective responses.

Given the inevitable inconsistencies between school districts in different states or even within a state, local and state officials might have legitimate complaints about the manner in which their applications were evaluated. Coupled with the fact that EPA did not consider the burden each state has with asbestos removal, there appear to be problems with the system by which the money was allocated. Presumably, money was distributed to school districts that needed it, but there are many more school districts throughout the nation that still have a tremendous need for funding from this program.

(6) Retention and Expansion of Contractor Training Institutes

Currently, the EPA is funding contractor training institutes at three universities. The Congress has shown great concern regarding the lack of a sufficient pool of trained contractors to perform abatement activities. In fact, the Senate Appropriations Committee has earmarked the $5 million appropriation for ASHAA for FY 1985 to go specifically to further development of a model contractor certification and training program as well as grants to states to follow such models.

It has come to our attention that the current institutes have been told that their budgets will be cut next year and that no funds should be expected for the following year. Simultaneously, these institutes are swamped with "technical assistance" referrals from EPA Regional Asbestos Coordinators (RACs) around the country.

It is clear that the contractor certification program should be retained and expanded. Technical expertise is critical to proper abatement and saving lives.

(7) Full Funding for ASHAA for FY 86 and Outyears.

As we have indicated, ASHAA is the centerpiece of the EPA's asbestos program. Without ASHAA and the resources it brings, there would have been little or no movement in this area. While EPA touts its activities, the Administration has not requested any funding for FY 1986. The EPA justifies this decision be claiming that they could not estimate need. This decision has never been revised despite requests for over $530 million in the first year of the program. As school officials become more familiar with the program, the requests are likely to double. In the face of a predictable increase added to a $500 million backlog in current applications, EPA's claim appears hollow.

We urge this Committee to work toward full funding in FY 1986. The House has already taken preliminary action on this matter.

Our Goal: Protect the Lives of Our Children, Workers and the Community

Finally, we must keep uppermost in our minds the underlying reason for this program and the urgency for EPA action on a broader policy -- people's lives are at stake — children, workers, community. One of the great values of the EPA regulatory hearings was to bring out the hairraising experiences of workers, parents, teachers at the local level. (We have excerpted these comments in Attachment 6).

I would like to leave you with comments from some of our members who look to you for guidance.

* Alexis Rankin, Occupational Safety and Health Consultant, SEIU Local 390/400, San Francisco, CA:

"Last summer, in the San Ramon School District, one of our janitors read the asbestos removal regulations which had been posted in the hallway of the school where removal was underway. She went by that school at night because the removal work was done at night. She looked in the classroom window and she saw men that she described as Spanish-speaking stripped to the waist, without masks, without respirators, removing asbestos tiles from the ceiling and dumping them in the teacher's wastebasket. Then she saw then vacuuming up the asbestos with the teacher's vacuum cleaner."

* William Willet, SEIU Local 208, Indiana:

"I asked the head custodian how long ago she had noticed the asbestos. She said, 'well, about a year ago I mentioned it to the supervisor that whenever we would go up to change lights in the ceiling, there would be white stuff coming down, a lot of heavy white dust!' She asked him what it was and he said, 'well, don't worry about it, just change the lights, and you know, keep on working!' This certainly points out the need for some type of standards. What good is it to tell the school employee of the presence of asbestos if you're not going to tell him how to protect himself or require that the school take the necessary steps to protect him."

* Bob Scarrioffini, President, SEIU Local 140, Portland, Oregon:

"When I go to work each morning, I go into my boiler room and turn on the fan. All we hear is we have asbestos in the ceilings, nobody realizes we have it in boilers and on the pipes. The pipe that goes to the heating ducts has asbestos in it. Everytime I turn it on, the asbestos particles go into the system, into the whole school and then every child, teacher, secretary, and custodian has exposure to the fibers — 192 days a year for teachers and students and 365 days for regular employees."

* Bill McDonald, President, Boston School Custodians

"In the Boston public schools there are approximately one hundred and twenty-nine buildings, one hundred and eighteen of which have asbestos present in them. They are not using removal as a remedy of choice. They are not doing exposure assessments. they are not providing any protective gear for anybody in the building. In a negotiation session we asked that respirators and things like that and they said they didn't see any need, although there has been no studies for exposure assessment in schools. In Boston, I have received two letters from school departments threatening punitive action if I do not cease to monitor the removal in Boston public schools. The school department has agreed in writing that they would adhere to the EPA guidelines. I have not found one site where I have not found some abberration of those guidelines. We have a number of members in our organization that have died from cancer and other asbestos related diseases. We have done a cursory study in 1981 in the state of Massachusetts. In the year 1981, we had a 62 percent death rate from cancer. I do not know what the answers are. People are dying and unnecessarily."

NOTE: Attachment 7 - Background Information on EPA Regarding Asbestos in Schools - This is a chronology of events which you may find useful in reviewing EPA's program.

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DONALD WEIGHTMAN
SCOTT HEMPLING
MARGARET A McGOLDRICK

September 5, 1985

Mr. Ron Outen
Senate Environment and Public
Works Committee
410 Dirksen Office Building
Washington, D.C.

Dear Ron:

I enclose SEIU's response to Senator Stafford's inquiry regarding the use of an ambient air standard to identify asbestos hazard in buildings and the types of abatement requirements that EPA should establish.

Please let me know if you have any questions.

Very truly yours,

Daniel Guttman

cjc
Enclosure

RESPONSE OF THE
SERVICE EMPLOYEES INTERNATIONAL UNION
TO INQUIRY OF
SENATOR STAFFORD RE: ASBESTOS IN BUILDINGS

SEIU believes that an ambient air standard is not appropriate for determining which (school and other public and commercial buildings) are already unsafe. In the case of these buildings, the most severe hazard is posed by "peak exposures" that occurs when friable material is disturbed. (Peak exposures, for example, may occur where maintenance work is being done or when students/children "play" with friable materials.) An air measurement may show a relatively low level of ambient asbestos, but a visual inspection would show obvious potential for peak exposure. SEIU therefore urges that in cases where visual inspection shows obvious potential for peak exposures (e.g., damaged surfacing materials and torn pipe/boiler coverings) the material be repaired or removed.

In its litigation with EPA, SEIU has attempted to determine the extent and type of risks that remain to be addressed in the nation's schools, whether by EPA rulemaking or legislation.

It appears to SEIU that, notwithstanding EPA's "guidance" and "technical assistance," the following categories of risk remain to be fully addressed: 1/

1/ The bases for the above conclusions are detailed in Sections II-III of an SEIU pleading seeking summary judgment, a copy of which is enclosed.

1. Thousands of schools have not complied with EPA's inspection rule; evidence shows significant failure by schools to include boiler rooms as part of the inspection.

2. Thousands of schools may have taken some abatement action, but a significant number have done so improperly, and may have increased risk. Schools which believe they have acted properly, but have not, may not take needed further action.

3. A significant number of schools which contain hazardous materials have taken no abatement action, and are not required to do so under EPA's program.

4. A large, but unknown, number of schools which still contain potentially hazardous materials are not reinspecting as urged by EPA guidance.

SEIU believes that an appropriate approach to these risks would include rules or legislation requiring:

1. Periodic reinspection of schools for asbestos-containing friable material where there is no appropriate certification that all hazard has been removed. (A reinspection requirement has been repeatedly recommended by EPA internally.)

2. That if friable asbestos is found, an abatement plan for each school would be required to be followed. This plan would include having a qualified expert inspect and analyze the potential hazards according to standards or guidelines developed by EPA. We would suggest that such a rule could be enforced largely through the persuasive efforts of parents, teachers, union members, and the press, without a need for major EPA

involvement. (This approach has been recommended internally within EPA.)

If a shortage of experts makes it unwise to implement such a rule in the near term, a short term alternative which would be highly beneficial would require that all visually damaged asbestos sprayed and troweled on surfacing materials and pipes and boiler coverings be repaired or removed.

3. That boiler rooms be inspected or reinspected and the results of such inspection be forwarded to EPA. (EPA's contractor "Evaluation of Asbestos in Schools Identification and Notification Rule" revealed that a substantial percentage of schools had failed to inspect boiler rooms.) A vigorous enforcement policy focused on boiler rooms should also be considered.

In the case of other (non-school) public and commercial buildings, the best evidence 2/ is that the number of buildings at risk is far larger than in the case of schools, resources to deal with risk are totally inadequate, and EPA's understanding is admittedly limited. SEIU would suggest that, at the minimum, a Notice of Proposed Rulemaking be issued which raises issues concerning "other" buildings.

2/ See Section IV of SEIU's enclosed court filing.

IN THE
UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF COLUMBIA

SERVICE EMPLOYEES INTERNATIONAL UNION

Plaintiff.

v.

Civil Action No. 84-2790

LEE M. THOMAS, ADMINISTRATOR UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al*.

Defendants.

PLAINTIFF'S STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT

Daniel Guttman
Scott H. Strauss

SPIEGEL & McDIARMID
1350 New York Avenue, N.W.
Washington, D.C. 20005-4798

August 15, 1985

Note: The attached has been excerpted from the above-named document. The complete document has been retained in committee files.

II. EPA STILL DOES NOT KNOW HOW MANY SCHOOLS CONTAIN HAZARDOUS ASBESTOS, BUT IT DOES KNOW THAT THOUSANDS OF SCHOOLS ARE EXPOSED TO THE LARGE CATEGORIES OF RISK THAT REMAIN

EPA's program has not satisfactorily reduced the unreasonable risk to public health posed by asbestos-containing materials. Notwithstanding EPA's "guidance," "technical assistance" and inspection rule, large categories of risk remain in the nation's schools. Indeed, EPA cannot even establish that its program has not been causing more cancer than it has been preventing. In the material that follows, SEIU summarizes the best evidence on (1) the extent of the hazard in schools, (2) the extent to which actions have been taken in keeping with EPA guidance, and (3) the large categories of risk that remain. 36/

EPA still knows all too little about even the overall dimensions of the asbestos-in-schools problem. EPA simply does not know: (1) how many schools contain asbestos-containing materials; and (2) how many schools containing asbestos have completed all abatement in accordance with EPA guidelines.

EPA does know, however, that notwithstanding its inspection rule and over one-half decade of "guidance" and "technical assistance," (1) many schools have not even identified all friable asbestos; (2) many schools with friable asbestos have not taken any action to abate; (3) many schools that have taken action have performed abatement improperly, and have increased risk; (4) many schools that either have not taken action or have

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36/ Section IV, *infra*, considers outstanding risk in other (non-school) public and commercial buildings.

taken improper action are not engaging in periodic reinspection as urged by EPA's guidance; and (5) many schools that have acted improperly do not even realize they have acted improperly, and therefore are unaware of the need for any further remedial action. EPA does not know the precise number of schools that fall into each of the above categories. The best evidence available to EPA, as discussed below, shows that in each case the number is in the thousands.

A. At Least 30,000 Schools Are Estimated To Have Found Asbestos But, Because of Widespread Failure By Schools To Inspect Boiler Rooms, Thousands Of Schools Have Failed Even To Identify All Asbestos

EPA's public estimate is that at least 30,000 schools found friable asbestos in their inspections. There has been substantial underreporting of asbestos. In particular, there has been systematic failure to inspect boiler rooms, where asbestos is often present. While EPA knows that its 30,000 school estimate is an underestimate, it has not tried to determine the precise extent of the underestimation.

EPA's February 1984 "grant" of SEIU's petition cited its estimate that friable asbestos was contained in approximately 8,600 public schools (44 Fed. Reg. at 8451). In October, 1984 EPA released the results of a contractor survey that evaluated EPA's inspection and notification rule (F1 #7). 37/ The

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37/ EPA's inspection rule did not require schools to report the results of their inspections to EPA. EPA was therefore required to estimate the results of inspections from a survey.

contractor found that EPA's longstanding assumptions about the scope of the school hazard were tragically optimistic (Fl #7).

The contractor found that the number of schools estimated to have inspected and found asbestos-containing friable material was over three times the approximately 10,000 public and private buildings previously estimated to contain asbestos. EPA had previously estimated that 3,000,000 students and 250,000 employees occupied school buildings which contained friable asbestos (45 Fed. Reg. 61970); its 1984 survey estimated the numbers at 15,000,000 students and over 1,000,000 school employees (Fl #7, at xvi).

The 1984 survey further found that there was systematic failure to inspect for boiler room asbestos; therefore the estimate that 30,000 schools contained asbestos-containing friable materials understated the magnitude of the problem.

The contractor survey was conducted in two parts. The contractor conducted a telephone survey of schools and then visited 90 schools to verify the quality of the telephone responses.

Based on the results of the telephone survey, the contractor estimated that 30,830 schools had asbestos at the time of inspection (Fl #7, at xii). (When this number was adjusted to reflect schools which did not inspect, the estimate was increased to 32,860.)

In conducting the onsite visits, however, the contractor found that 25 of the 90 schools had missed friable materials during the inspection. In 20 of the 25 cases the friable material that was missed was limited to boiler room material (Fl #7, at x). .

The contractor stated that its onsite finding "suggests that LEAs do not realize the boiler rooms require inspection." The onsite findings, said the contractor, also "indicate that the number of schools found to contain friable materials in the telephone survey is an understatement" (Fl #7 at x). There are approximately 100,000 schools (according to the survey). The survey, which remains the best evidence of boiler room underreporting, indicates that nearly 20,000 schools have friable asbestos in boiler rooms that has not been identified. 38/

The contractor stated, however, that it could not "indicate the magnitude of the underestimate" because the schools visited "were not selected to be satisfactorily representative of any larger population but rather were selected to maximize the probability of finding problem areas" (Fl #7 at 3-12). (The contractor report did not explain why one group of schools should be considered more likely than another to fail to understand that boiler rooms must be inspected. Indeed, the contractor also stated that the schools visited are "generally representative of the population." (Id. at 3-9)

38/ This magnitude is derived by applying the percentage of schools where boiler room friable materials were clearly missed (20 out of 95, or 21%) to the total school population (roughly 100,000), with an adjustment for the contractor's further estimate (Fl #7, at 3-12) "that 89 percent of the schools with friable materials have asbestos-containing friable materials."

In any event, as acknowledged by Mr. John Rigby, the EPA staffer responsible for preparing the November 30 letter, given the number of school buildings (approximately 100,000) and the 27-28% underreporting (25 out of 90) found by the contractor, it is possible that (a) friable asbestos may be present in thousands of schools that did not report finding any; (b) friable asbestos may have been missed in thousands of schools that did report finding some; and c) some combination of "a" and "b" may obtain (Pl. #1, at Tr. 40-41). In sum, EPA's current best estimate is that at least 30,000 schools found asbestos containing friable materials; but EPA knows that this estimate is itself greatly understated.

B. Unreasonable Risk Exists Because A Large Number Of Schools Have Not Complied With The First Step Required By EPA: Inspection

A predicate for satisfactory abatement is the completion of an inspection in accordance with EPA's inspection and notification rule. In addition, while not required by the rule, EPA guidance provides that periodic reinspection should be performed until it is certain that no asbestos containing material remains.

There has been widespread failure to comply with EPA's inspection rule. In particular, there has been systematic failure to inspect for and identify boiler room asbestos. Moreover, while many thousands of schools should be conducting reinspections, EPA simply has no idea as to whether necessary reinspection is ongoing.

1. "Too Many Children Are Still At Risk" Because Of The Large Number Of Schools That Have Not Complied With EPA's Inspection Rule

EPA's 1984 contractor survey found that (1) as of June 1983, the date for compliance with EPA's inspection rule, less than 10% of LEAs (Local Education Agencies) were in full compliance with the rule; (2) as of January, 1984 2/3 of LEAs were still in non-compliance with most aspects of the rule.

EPA has assigned enforcement staff to monitor compliance with the rule. The monitors have continually found violation rates in excess of 50%. (E.g., Fl #6, Fl #7, Fl #9; Pl. #1, at Tr. 317-319.)

In a 1984 memo discussing the proper level of resources for the compliance program, the senior budget official for EPA's Office of Pesticides and Toxic Substances ("OPTS") stated that (Pl. #6 at 2):

> "If noncompliance rate doesn't drop below 15 percent, too many LEAs will be in violation hence too many children still at risk."

2. EPA Still Does Not Know the Extent of Boiler Room Asbestos that has not been Identified

As stated, at IIA, supra, EPA's contractor found systematic failure to identify boiler room asbestos. This failure has been independently reported to EPA by its field staff.

In a January 1984 memo to headquarters, EPA's Region I (New England) Asbestos Coordinator reported (Pl. #7):

> "... in many typical school situations, seriously damaged and deteriorating asbestos is not accessible to children for it is "only in the boiler rooms..." Schools do not feel a

> need to recognize friable asbestos that is not accessible to children...
>
> * * *
>
> "...compliance monitoring activities in Region I forces one to question any data concerning asbestos in schools that is voluntarily submitted. Forty percent of Region I schools certify to being free of friable material, a certification that is not supported by site visits."

In repeated monthly reports in 1984 and 1985, EPA's Region VIII (headquartered in Colorado) reported (Pl. #8):

> "The LEAs who have been inspected seem to have two problems.
>
> 1. The pipes and boiler rooms at the start of the T.A.P.S. [technical assistance] programs were put on the back burner; this is coming home to haunt us; this is a time bomb awaiting..."

While the best evidence available to EPA shows widespread underreporting, EPA has evidently done no further survey to more precisely identify the magnitude of underreporting. Nor has it required reinspections that would provide needed information on a case-by-case basis. In May 1985 Mr. Rigby testified that he did not know of anyone at EPA headquarters "that is looking at the number of schools that may have failed to have inspected the boiler rooms even though they said they fully inspected" (Pl# 1, at Tr. 501).

3. EPA Does Not Know how many Schools are Not Reinspecting as Urged by EPA "Guidance"

EPA's guidance requires periodic reinspection until all asbestos-containing material is removed (Pl. Supp. #1). Where schools failed to identify all hazard in the initial inspection, or have abated improperly, reinspection is obviously also necessary.

In May 1985 Mr. Rigby testified that he was not aware of any effort by EPA "to get evidence as to whether schools are reinspecting as per the guidance." (Pl# 1, at Tr. 511). He further testified that he knew of no one at EPA headquarters "that is looking into the harm that may befall members of the public because schools which have asbestos are not reinspecting." (Pl # 1, at Tr. 501.)

C. EPA Does Not Know How Many Schools Have Satisfactorily Completed All Abatement; It Does Know That Unreasonable Risk Has Been Created, Rather Than Removed, Because A Substantial Amount of Improper Abatement Has Occurred

In the November 30 letter (at 5), EPA cited its 1984 contractor survey for the proposition that 90% of schools with friable asbestos-containing materials have completed, ongoing, or planned abatement projects. While the letter states that EPA's goal is not abatement, but "proper" abatement, there was nothing in the letter which reflected on the quality of the abatement referred to. The contractor survey itself did not undertake to measure the quality of abatement (Fl #7; Pl. #1 at Tr. 328).

EPA agrees that if abatement is not done in keeping with its guidance risk may actually be increased. EPA has never systematically undertaken to examine the quality of abatement. EPA, therefore does not know precisely how much abatement has been done properly. There is overwhelming evidence that much, perhaps most, abatement has been improper. EPA's recently released "1985 Edition" of EPA's guidance document belatedly acknowledges that:

> "EPA's experience with asbestos abatement and comments from technical advisors suggest that many contractors cannot properly conduct abatement projects" (Pl. Supp. #1, at 6-3).

EPA has been told by a leading medical expert and by its own officials that, because of the extent of improper abatement, EPA's program is causing more cancer than it is preventing. EPA admittedly has never undertaken any investigation which might show that this is not the case.

1. A Large Amount of Abatement has been Improper and not Removed Risk

At this late date EPA has yet to conduct a systematic survey of the quality of abatement (Pl. #1, at Tr. 133; 300-301). All the evidence available to EPA, however, shows that substantial amounts of abatement have been performed improperly. This evidence includes (1) the testimony before EPA at hearings conducted in response to SEIU's petition, (2) the reports of EPA field staff, and (3) a Spring 1984 poll of EPA officials that is the "best information" developed by EPA.

In the public hearings conducted by EPA following its "grant" of SEIU's petition, EPA was repeatedly told that much improper abatement had taken place. Those presenting such testimony included, *inter alia*, medical experts, parents, and workers (*see*, *e.g.*, D5 file items #29, 14, 16, 17).

The public testimony before EPA was confirmed by the strong reports made to the Agency by EPA's top field staff.

In the Spring of 1984, the prevalence of improper abatement was confirmed by EPA regional officials gathered for an annual "National Meeting" at headquarters. An EPA document records (E1A #19):

> "The National Meeting attendees were concerned that poor abatement contractor performance is creating greater exposure and worse health hazards than if asbestos is left in place and unabated."

At the "National Meeting" gathering, EPA polled its top regional officials (Regional Asbestos Coordinators or "RACs"). Dr. Moore summarized the results in a memo to Deputy Administrator Alm (P1#2):

> "When the Regional Asbestos Coordinators (RACs) were polled recently, based on their field experience, they stated their belief that less than 25 percent of all asbestos abatement projects are performed in accordance with the procedures discussed in the OTS [Office of Toxic Substances] guidance document."

John Rigby testified that the "RAC poll" represented "EPA's "best judgment" and "best information" at the time of its November 30 decision to deny SEIU's petition. As of late Spring 1985, he stated, EPA had not undertaken any further "RAC poll" or other study that would provide further evidence on the matter (Pl. #1, at 500-501).

In March 1985, the United States General Accounting Office ("GAO") released a report on asbestos-in-schools. The GAO concluded that no one really knows how adequate the quality of abatement has been (Pl. Supp. #6, at 63-64).

> "We are not able to determine if the school districts selected appropriate activity or if the work done at the school district was adequately performed.... no one really knows whether appropriate actions were selected and whether the work was performed adequately." 39/

2. Because Much Abatement has Been Improper, EPA Cannot Even Provide Assurance that its Program has been Preventing More Cancers than it is Causing

EPA admits that improper abatement may actually increase risk (e.g., Pl. Supp. #1). It has been told by medical experts,

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39/ The GAO report was based largely on interviews with school district, state, and EPA officials. The GAO "did not verify the information in most cases because of the short timeframe." The GAO cautioned that "[s]ince time did not permit the use of a statistically valid sample, our data, based on a sample of 36 public school districts in 12 states, cannot be projected to the entire school district population" (Pl. Supp. #6, at 11).

The GAO reported that (unidentified) EPA officials could judge that 50% of removal activity was "performed satisfactorily," and that state officials could judge that 34% of removal activity was satisfactory.

The GAO further reported that (unidentified) EPA officials stated that only 28% of all abatement actions were "most appropriate," 13% were "not most appropriate," and there was "no basis to judge" the remaining 59%. The report did not explain whether actions could be both "satisfactory" and "not appropriate." (For example, if a school properly encapsulated in a situation where EPA's guidance did not call for encapsulation.) Thus, the GAO report, at best, shows that, (1) some EPA officials estimate that 50% of removal may have been proper; but cannot vouch for the other 50%, and (2) these officials can vouch for only 28% of all abatement actions as "most appropriate".

In the absence of underlying data (including a comparison of those surveyed and the questions asked) it is impossible to compare the RAC poll and the GAO findings. At deposition, John Rigby testified that EPA itself did not have the data underlying the GAO's survey. (Pl. Supp. #4, at Tr. 332-333) as well as others, that its program may be causing more cancer than it prevents.

Dr. Robert Sawyer, the principal technical consultant on EPA's initial guidance document, 40/ for example, told EPA below that:

> "Based upon my observations, the EPA program under the present conditions will cause more adverse health effects, including malignancies, that it can ever prevent."

(D5 File #16, at Tr. 156)

John Rigby, at his deposition, admitted that in responding to SEIU EPA never even undertook to analyze Dr. Sawyer's claim. Mr. Rigby knew of nothing in EPA's files, much less the public record, that provides direct rebuttal to Dr. Sawyer's claim. (Pl# 1, at Tr. 134-136).

SEIU discovery further revealed that the likelihood that EPA's program may be causing cancer is supported by EPA's own contractor study (withheld from the proceeding below) of the cost and effectiveness of abatement in schools (E1A #30, 33, 33A, 37, 38). In only one case did the contractor consider a success rate (25%) consistent with EPA's "best judgment." (E1A #30, at B and Pl #1 at Tr. 190-193) When this success rate was coupled with stated assumptions about increased risk, the contractor projected a net increase in cancer as a result of abatement. (Id.)

40/ Dr. Sawyer is identified as a "peer reviewer" on the recently released "1985 Edition" of EPA's guidance document (Pl. Supp. #1, at viii).

Mr. Rigby agreed that EPA "had no evidence to show that it [the contractor's "worst case"] might not be the case." (Pl #1, Tr. 193. 41/ Mr. Rigby admitted that, as of May 1985, EPA had no study which would show that "there have been net positive effects to EPA's program to date. (Pl #1, Tr. 596-597).

D. Unreasonable Risk Remains In The Many Schools That Have Taken No Action To Abate Hazard Or Have Yet To Complete All Abatement Urged By EPA Guidance

Above and beyond schools which have acted improperly, EPA knows that a substantial number of schools have taken no action to abate hazard. In addition, many schools which have stated that they have completed an "abatement project," have not completed all abatement provided for by EPA guidance.

1. Many Schools have Taken no Action to Abate Hazard

EPA claims that many schools have taken actions to abate hazard. Even so, EPA knows that many others have not -- notwithstanding years of "technical assistance" and "guidance."

In 1984 EPA employed a contractor ("Putnam-Hayes") to perform a cost and effectiveness study of school abatement (E1A #30, 33). Putnam-Hayes utilized existing contractor survey data (F1 #7) to determine outstanding abatement needs. It calculated that 8,400 schools which are known to contain friable asbestos

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41/ EPA has never undertaken to determine the extent to which improper abatement has actually increased risk (Pl. # 1 at Tr. 133). As Mr. Rigby pointed out, it therefore cannot be finally concluded that the increase in cancers shown by the "worst case" examined by the contractor actually obtains. (Pl. #1, at Tr. 190-193).

had taken no abatement action (E1A #30). In addition, Putnam-Hayes calculated that 3,950 others were performing only "operations and maintenance." (This activity, EPA's current guidance document makes clear, is not abatement.) (Pl. Supp. #1, at 5-3-6) Thus, by EPA's own estimate, the number of schools which have undertaken no abatement is as large as the total number of schools that EPA assumed contained asbestos in 1979, 42/ when EPA undertook its asbestos program.

The Putnam-Hayes calculations, moreover, likely understate the number of schools that have taken no action to abate asbestos. The numbers were based on the number of schools which reported to EPA's survey contractor that they found asbestos (F1 #7). As explained above, however, the survey contractor found that many schools did not inspect for boiler room asbestos and therefore could not report asbestos that is present. 43/

42/ Approximately 10,000. 45 Fed. Reg. 61970.

43/ Moreover, there is substantial evidence that the survey likely overstated the amount of abatement in schools which reported finding asbestos. At the time the contractor survey (F1 #7) was conducted, EPA was pointedly told by its regional officials that voluntarily supplied data was unreliable, and, in particular, that the abatement data cited in the survey was "grossly exaggerated." It chose, however, to ignore these comments, and to rely on these data as the basis for the decision to deny SEIU's petition.

On review of a draft of the contractor survey, for example, Wolfgang Brandner, EPA's Region VII Asbestos Coordinator, told EPA:

> "The Compliance Monitoring Program as well as several state agency surveys indicate

[FOOTNOTE CONTINUED ON NEXT PAGE]

2. In Instances Where EPA Says An "Abatement Project" Has been Undertaken, an Unknown but Substantial Amount of Risk Remains Unabated

Even if it could be assumed that all abatement which has occurred has been conducted properly, and if the thousands of schools who have conducted no abatement could be ignored, further abatement would still be required in thousands of schools.

The November 30 letter admits that the contractor survey findings cited by EPA to show that much abatement has been undertaken refer to "abatement projects" (November 30 letter, at 5). 44/ Schools trying to abate commonly use more than one

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[FOOTNOTE CONTINUED FROM PRECEDING PAGE]

> that only approximately 1/3 of the schools containing asbestos have abatement programs. The statement that 93% of LEAs have an abatement program seems grossly exaggerated to me, not supported by my experience."

EPA however, did nothing to investigate Mr. Brandner's claim (Pl. #1, at Tr. 61-62). Instead, as recorded in an internal EPA memo, EPA decided that "a qualifying statement will be added [to the survey] that abatement figures refer to any type which is completed, ongoing or planned" (E1A #32 at item 18).

Proof that the survey data overstates the extent to which abatement actions have been taken lies in the first round of school requests for financial assistance under the Abatement Act of 1984 grant program.

An internal EPA memo drafted shortly after the Act's passage calculated that, based on the contractor survey results, the total amount of dollars needed under the Abatement Act would be $141.7 million (Pl. Supp. #7). SEIU understands the total sum requested by schools in response to EPA's first solicitation request alone was over $600 million.

44/ EPA's November 30 letter relies on its 1984 contractor survey for the claim that "90 percent of schools [with asbestos] had either completed, started, or were planning to start abatement projects." (November 30 letter, at 5) However, the underlying figures show that:

[FOOTNOTE CONTINUED ON NEXT PAGE]

abatement project (Pl. Supp. #2, at 3). The contractor report does not identify the number of instances where complete abatement has been done. For example, a school may complete an "abatement project" that "removes" some, but not all, asbestos in the school. Alternatively, a school may have completed a "project" that "encapsulates" or "encloses" asbestos, but, this would still require reinspection and further abatement as materials deteriorate (Pl. #4 and Pl. Supp. #1). Assuming that

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[FOOTNOTE CONTINUED FROM PRECEDING PAGE]

1. The percentages employed by EPA do not include schools that, because of failure to inspect adequately, had erroneously failed to report asbestos, and therefore, cannot have undertaken to abate it. (*See*, Section IIA and IIB2, *supra*.)

2. Only a fraction of the abatement activity cited by EPA could even conceivably lead to complete abatement.

EPA "guidance" provides that further action is needed until all asbestos is removed. Only 12,053 schools (out of 30,830 estimated by the contractor to have found asbestos) identified removal as the method of abatement (Fl #7, at 5-27 and A-51). Only 6,064 of the 12,053 reported that removal had been completed (Fl #7, at A-51). Thus, only 40% (12,053 out of 30,830) of schools known to contain asbestos reported an abatement action that might conceivably fully satisfy EPA guidance; only 20% (6,064 out of 30,820) had "completed" such action.

In fact, as discussed above, EPA knows much removal has been improper, and the contractor report does not show the degree to which the removals identified by the contractor removed all hazard in the schools, or were limited removal "projects."

3. Much of the "abatement" activity in the percentages employed by EPA is not "abatement." The contractor stated that "28% ± 4%" of Local Education Agencies are using special operations and maintenance procedures and periodic reassessment as the sole method of abatement (Fl #7, at 2-3). The "glossary" to the survey itself shows (Fl #7, at C-27), and the "1985 Edition" of EPA's guidance confirms (Pl. Supp. #1 at S-3-6) that special operations and maintenance" is *not* a method of abatement.

the survey data is correct, therefore, many thousands of schools who have taken some abatement action, must still take further action (Pl. #1 at Tr. 532-533).

CONCLUSION: AFTER OVER ONE-HALF DECADE OF EPA'S PROGRAM SUBSTANTIAL CATEGORIES OF RISK REMAIN, AND NEW CATEGORIES HAVE BEEN CREATED

As detailed above, after over one-half decade of school activity under EPA's program, consisting of a "one time" inspection rule and "technical assistance" to dispense EPA's "guidance," the best evidence shows the following large categories of risk remain:

1. Most schools (over 50,000) did not comply with the inspection rule, and the best evidence shows systematic failure by schools to include boiler rooms as part of the inspection. Thus, there can be no assurance that all hazard has even been identified, and the best evidence is that thousands of schools missed boiler room asbestos.

2. Many schools may have taken some abatement action, but thousands have done so improperly, and many have increased risk. Thus, many schools who believe they have solved their problem may, in fact, have made matters worse.

3. Thousands of schools which contain potentially hazardous materials have taken no abatement action, or only incomplete action, and are not required to take abatement action under EPA's program.

4. Thousands of schools which still contain asbestos-containing materials may not be reinspecting as required by EPA guidance.

5. Thousands of schools do not know that they have acted improperly. They believe they have acted properly and are unaware of the need to take further action.

All of the risks identified above, it should be emphasized, have persisted -- some have even been created -- despite over one half decade of EPA "guidance" and "technical assistance."

III. EPA'S PROGRAM, EVEN AS SUPPLEMENTED, WILL NOT ADDRESS LARGE CATEGORIES OF OUTSTANDING RISK IN THE NATION'S SCHOOLS

In the period since SEIU's petition, there have been certain new developments which EPA's November 30 letter (at 6-9) claims will succeed in reducing risks which its past efforts have not adequately addressed. These developments are (1) the Asbestos Hazard Abatement Act of 1984 (ASHAA); (2) EPA's promise to develop "model" contractor certification legislation and "pilot" training centers, and to expand its "technical assistance"; 45/ and (3) EPA's program for enforcement of its inspection rule.

At the outset, the very need for these activities is an admission that EPA's inspection rule, "guidance" and "technical

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45/ "EPA's model" contractor certification materials draw on the actions of those (few) states which have proceeded with contractor certification. (See, e.g., Pl. Supp. #1, at L-1).

assistance" have not succeeded in satisfactorily reducing risk. Even so, the new activities simply and admittedly will not directly address large categories of existing risk, as identified above.

First, none of these activities will require schools to take any further action, even where inspection has shown that the most severe hazard exists.

Second, schools will not be required to reinspect, even if friable asbestos (or, indeed, non-friable asbestos) was found in the first inspection.

Third, EPA's new programs do not address cases where schools have taken abatement action and believe they have solved their problem, but have abated improperly and have made matters worse. Where a school believes it has abated properly, there is nothing in EPA's present or proposed programs that require it to revisit the question.

Fourth, while EPA's new program reaffirms the need to follow EPA guidance, EPA will continue to permit many schools to take action without requiring that they employ adequate expertise. It does so even as EPA guidance now admits that "many contractors cannot properly conduct abatement projects" (Pl. Supp. #1, at 6-3).

Fifth, EPA's budgetary and resource commitments to its "non-regulatory" programs are totally inadequate to meet need. If, indeed, all schools with asbestos did seek to follow EPA guidance and remove hazard, EPA has refused to commit to urgently needed "technical assistance" required to ensure that they can do so. Moreover, EPA has evidently been precluded from making any such commitment by the Office of Management and Budget ("OMB") (Pl. Supp. #4, at Tr. 427).

Finally, in undertaking the "further programs" EPA did not study the national need for asbestos experts. EPA did not know how many experts are available and how many are required. Mr. John Rigby, the principal staff author of the November 30 letter, testified that "we simply don't know" if the pilot center and contractor certification programs will be capable of producing an adequate number of experts (Pl. #1, at Tr. 448-452; quotation at 452).

In sum, the supplements to EPA's program are premised on EPA's recognition that its historic program has not resulted in the adequate abatement of risk. As presently constituted, however, these supplements will, at best, address only a portion of the risks they are intended to address, and large categories of risk will remain completely unaddressed.

A. Congress Recognized That EPA Must Take Action To Assure Proper Abatement, But EPA Would Limit This Action To The Limited Number of ASHAA Grantees

EPA's claim that the Abatement Act of 1984 ("ASHAA") will address outstanding risk is ironic. This legislation was passed over EPA's opposition. 46/ The 1984 law expressly reaffirmed Congress' 1980 finding that EPA's existing guidance

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46/ See, SEIU Statement of Material Facts, Item #33).

was inadequate, and that EPA had no "systematic" program for "remedying" hazard. 47/ Congress therefore specifically required EPA to develop standards to ensure that Federal funds provided under the Act are properly spent. 48/

EPA admits that ASHAA funds are quite limited, and fall far short of the need. Where schools are fortunate enough to receive ASHAA funding they will (hopefully) benefit from the Congressionally mandated procedures to assure that necessary abatement actions are undertaken, and performed properly.

The vast majority of schools at risk, however, may not receive ASHAA funds. In the absence of the rulemaking sought by SEIU here, EPA will not extend to these less fortunate schools the procedures that will assure that appropriate actions are taken, and that they are properly performed.

47/ See, Congress' findings "6-8," as quoted at fn. 32.

48/ The 1984 Act states, at 20 U.S.C. 4015:

> (a) The administrator shall promulgate rules and regulations as necessary to implement the authorities and requirements of this title.
>
> (b) The Administrator shall also establish--
>
> (2) within 90 days, standards for determining--
>
> (A) which contractors are qualified to carry out the activities referred to in paragraph (1); and
>
> (B) what training, equipment, protective clothing and other information and material must be supplied to adequately advise and protect school employees utilized to carry out the activities in paragraph (1).

In 1985, the first year in which ASHAA dollars are available, EPA awarded money to only 341 schools from 4,800 applicants (Pl. Supp. #2). EPA stated that the $45 million available was only a fraction of the sums required (Id.). EPA therefore pointedly told schools that they cannot rely on receiving ASHAA aid, and should therefore take action immediately. As EPA put it (Id):

> "With only $45 million to work with at this time, EPA can only provide grants and loans to the country's most needy school districts. As a practical matter, probably only a few in each state will get funding. Since exposure to asbestos can be hazardous to children's health, EPA urges school officials to deal with their asbestos problems right away and not delay abatement projects in anticipation of federal grants."

B. EPA's Proposed Contractor Certification And Pilot Center Programs Are Required Because Schools Have Not Followed EPA Guidance; But The New Programs Do Not Require That Guidance Be Followed Either

EPA's November 30 letter states that EPA is funding pilot centers to "provide information concerning the identification and abatement of asbestos hazards and to educate and train people in proper asbestos abatement and identification techniques" (November 30 letter, at 6). In addition, the letter announced a "contractor certification program" which "will include model State legislation designed to establish effective contractor certification programs at the State level" (Id., at 7).

These programs are admittedly needed because much prior abatement was improper. 49/ These programs, however, do not require schools who have already employed incompetent contractors to take further action. Unfortunately, the best evidence is that schools which have acted improperly believe they have taken proper action, and see no need for further action. 50/ Thus, the very risks that caused the creation of the "pilot center" and "contractor certification" programs are not likely to be addressed by them.

Insofar as contractor certification might be helpful to schools which will act in the future, there is no assurance that the promised expertise will be available, or that the expertise will be used.

EPA has chosen not to require states to adopt its contractor certification standards. Instead, it has proposed "model" standards which may be adopted. Once again EPA proposes to provide information, but provides no assurance that it will be used. It does so, of course, against a background which shows widespread inattention to EPA's guidance.

49/ This recognition has been publically confirmed by EPA in the recently released "1985 Edition" of EPA's guidance, as quoted above (Pl. Supp. #1, at 6-3).

50/ Thus, the March, 1985 GAO report reported that "school district officials" sampled believed that 93% of removal was performed satisfactorily while state officials could judge only 34% was satisfactory and EPA officials could judge only 50% was satisfactory (Pl. Supp. #6, at 46).

Moreover, SEIU discovery revealed that the contractor certification program now undertaken by EPA was viewed by EPA as totally inadequate to meet need. In an internal memo to Deputy Administrator Alm, Dr. Moore recognized that a contractor certification program does not lend itself to "implementation in a piecemeal fashion..." (Pl. #2 at 10). Dr. Moore concluded that it should only be proceeded with by EPA if it is done on a national basis and there is assurance that states are provided resources to assure state follow through. The program undertaken by EPA now is precisely the "piecemeal" program which EPA internally counseled against.

At present, EPA can only state that model certification standards will be available and cannot even suggest that a majority of states will adopt it. In March, 1985 testimony before Congress, Dr. Moore conceded that the contractor certification program was a large shell with a small peanut (Pl. Supp. #3):

> Mr. Moore. [Dr. John Moore] ... . There is a very keen state interest in contractor certification, and we hope to have somewhere between 12 and 15 programs in different states by June or mid-summer ... .
>
> Mr. Boland [Congressman Boland] You mentioned 15 states. I presume they have good certification programs, have they not?
>
> Mr. Moore. No, in many cases they are nonexistent ... This is an attempt to plant seed money to get them to implement certification programs at the state level.
>
> Mr. Boland. How many states have good certification programs?

Mr. Moore. Two or three, as near as I am able to remember.

C. EPA's Enforcement Of Its Inspection Rule Recognizes A Problem Hardly Assures Abatement

In light of widespread violation of its inspection rule, EPA has a program to monitor compliance with the rule.

EPA's compliance program, however, is admittedly not designed to require abatement, even if hazard is known to exist. If a school is in compliance with the inspection rule, EPA will take no further action, even if abatement is necessary and none is planned by the school (Pl. #1, at Tr. 344-345). Moreover, given the planned level of resources the Agency intends to devote to this activity, EPA will take years to inspect all schools -- assuming the program is continued. 51/

D. EPA's "Expanded Technical Assistance" Program Is Still Too Little Too Late

EPA claims that its technical assistance program will "ensure" building owners/operators the assistance needed to make

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51/ EPA's November 30 letter records (at 8-9) that as of November, 1984 EPA had "inspected a total of 7,843 schools," in the year and a half after the date for compliance with the inspection rule. At that rate it will take EPA years to inspect all schools; assuming, as is by no means assured, that EPA will continue its compliance program until all schools are checked.

needed abatement decisions. 52/ If true, this claim would not be of any value to (1) the many schools which erroneously believe they have removed all risk and do not need further assistance, and (2) the schools which know they have risk but do not choose to take action. Even so, EPA has simply not committed itself to a level of technical assistance anywhere near that would be needed by schools which need it.

First, the November 30 letter itself does not refer to any budgetary commitments beyond FY 1985. In deposition, John Rigby explained that the Office of Management and Budget ("OMB") told EPA that it would not make any future financial commitments to "technical assistance" (Pl. Supp. #4, at Tr. 427). Thus, EPA's present claim has no support in budgetary reality. Moreover, as noted above, EPA has never even undertaken to investigate the number of "experts" needed, much less the number available (Pl. #1, at Tr. 448-452).

Second, EPA has still refused to commit itself to "technical advisors" who would be available to verify the quality of abatement. This need was identified as an "urgent need" by

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52/ EPA's Statement of Material Facts Not in Genuine Dispute #19 states that:

> "EPA plans to expand its program to ensure that owners and operators of schools and other public and commercial buildings have the necessary technical assistance to determine what actions are necessary ..."

Dr. Irving Selikoff, 53/ and others below. As an internal EPA memo shows, in rejecting this "urgent need" EPA recognized that it could not undertake this activity "without regulations in place setting required abatement standards" (E1A #24, Attachment 1, at 4).

Finally, the testimony before EPA below and internal EPA documents make plain that the amount of technical assistance provided by EPA is all too little, and the flimsiest of band-aids for a gaping and festering wound. 54/

IV. THE ENORMOUS RISK PRESENT IN OTHER (NON-SCHOOL) PUBLIC AND COMMERCIAL BUILDINGS IS ADMITTEDLY NOT EVEN WELL UNDERSTOOD BY EPA, MUCH LESS ADDRESSED BY EPA'S PROGRAM

EPA's November 30 letter (erroneously) claimed that its asbestos in schools program is working because many schools have taken action to remove hazard. EPA did not even assert such a claim in regard to other (non-school) public and commercial buildings. The number of "other" buildings at risk, EPA knows, is many times larger than the number of school buildings. EPA's program for "other" buildings is, however, admittedly limited to the totally-inadequate trickle down benefits of EPA's (inadequate) schools program.

A. EPA Admittedly Has Only "Limited Understanding" Of The Vast Risk In "Other" Buildings

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53/ Dr. Selikoff is the only witness identified by name in any of EPA's pleadings here. EPA acknowledges that Dr. Selikoff is "a leading expert in diagnosing asbestos-related health problems..." (EPA M.S.J. at 34).

54/ *See* SEIU Statement of Material Facts #118-132.

There is no dispute that friable asbestos is a hazard in "other" buildings as well as in schools. 55/ Thus, EPA states that its "guidance" should be applied in non-school, as well as school, buildings (Pl. Supp. #1) (November 30 letter, at 9-10).

A 1984 EPA contractor survey estimates that over 700,000 "other" public and commercial buildings contain asbestos; many times EPA's estimate of the number of school buildings at risk. 56/ The November 30 "decision" below recognized that the dimensions of the "other" buildings problem are vast and EPA's "understanding" is "limited" (November 30 letter, at 9). 57/

55/ To be sure, because of the long latency period of asbestos related disease and because children may inhale more friable materials because of their higher metabolism, buildings occupied by children pose special risks. On the other hand, situations of greatest hazard--*e.g.*, boiler rooms and maintenance work--are common to school and non-school buildings. Children, of course, also live in apartment buildings.

56/ Fl #8. The estimate does not include private homes but does include residential buildings with at least ten rental units.

57/ In May, 1985 deposition, John Rigby admitted that, while EPA now has a survey which estimates that over 700,000 "other" buildings contain asbestos, it has not even begun to systematically consider reduction of this risk (Pl. #1 at 458):

> Q:... Is there anything else [other than its contractor estimate of buildings at risk (Fl #8) and contractor study of the cost of abatement in schools (E1A #30)] that EPA had prior to the November 30 letter by way of facts or study that would tell it the full extent of the risk reduction possibility in the public and commercial buildings area?
>
> A: Nothing more than anecdotal information.
>
> Q: And had EPA organized the anecdotal information in any fashion?

[FOOTNOTE CONTINUED ON NEXT PAGE]

EPA has never even undertaken a survey which might show that any number of non-school buildings are taking any action to identify and remove hazard. Indeed, the November 30 "decision" only expresses hope that action will be taken in the future. 58/

B. EPA's Program Does Not Even Purport to Directly Address The Risk In Other Public And Commercial Buildings

EPA's "other" buildings program is limited to the hope that "other" buildings may indirectly benefit from programs primarily directed at schools. This hope is totally insufficient where (1) EPA's programs are inadequate to address risk in schools (Sections II-III *supra*); (2) the number of other buildings at risk is many times the number of school buildings;

[FOOTNOTE CONTINUED FROM PRECEDING PAGE]

A: Not really.

58/ The letter states that (emphasis added) (at 9):

> "We believe that the *activities we have undertaken or will undertake soon will encourage appropriate inspection for and abatement* of asbestos hazards in other public and commercial buildings..."

The letter does not specify which programs it refers to or how they will encourage proper action in non-school buildings. EPA cannot be suggesting that EPA's enforcement of its school inspection rule or a Congressional program directed at schools will meet the needs of the far larger (building) population to which they are not addressed. EPA's November 30 letter, for its part, does not cite any evidence that "other" buildings have been inspected or abated properly, much less at all. Indeed, it concedes that EPA merely hopes there will be action in the future.

(3) EPA has yet to even require inspections in other buildings; and (4) programs such as the Abatement Act of 1984 and the EPA's enforcement of its school inspection rule do not even apply to non-school buildings.

EPA suggests that the needs of "other" buildings will be met by EPA's technical assistance program (see, e.g., November 30 letter, at 9). This is preposterous.

First, EPA long ago recognized that its "technical assistance" program was insufficient even to get schools to inspect, and therefore issued a school inspection rule (E1A #20, at 4). EPA has never explained why "other" buildings will inspect without a rule.

Second, even if the November 30 letter's inflated claims for EPA's technical assistance program were accepted, the program would be totally inadequate to cover the problems posed by "other" buildings.

The November 30 letter states (at 5) that EPA's technical assistance programs handled 55,000 phone calls in the first eleven months of 1984. At that rate it would take over a decade to handle phone calls from the 700,000 "other" buildings estimated to contain asbestos; it could take several decades if the callers included buildings that did not necessarily contain asbestos. (Pl. #1, at Tr. 462-464) This, of course, assumes that EPA's technical assistance program will be exclusively devoted to "other" buildings. 59/

V. THERE IS MORE THAN A REASONABLE BASIS TO CONCLUDE THAT RULES SOUGHT BY SEIU ARE NEEDED TO REDUCE RISK

There is more than a reasonable basis to conclude that the rules sought by SEIU are needed to reduce risk. First, the need for further rulemaking on abatement standards has been virtually unanimously supported in testimony before EPA, not only by the very groups that EPA purports to be protecting -- parents, teachers, and school workers -- but by representatives of the asbestos industry as well. Second, the rulemaking now sought was recommended both by responsible EPA technical staff and Dr. John Moore, the author of the November 30 "decision." In recent Congressional testimony Dr. Moore confirmed that his November 7, 1984 recommendation to proceed with rulemaking had merit, but that EPA decided to "defer" action because of limited resources. Third, in recently proposing its immediately effective worker protection rule, EPA has relied on logic which applies equally to the rules at issue here. Finally, the need for the rulemaking

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59/ EPA documents show little time has been devoted to "other buildings." As EPA's December 1983 internal program review concluded (Fl #6 at 6) (emphasis added):

> "The Regions have made an attempt to respond to all calls, but this has been almost impossible given the limited number of resources available and the fact that no resources are targeted for work on public and private buildings and homes."

Safe Buildings Alliance

Suite 1200, Metropolitan Square
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Washington, D.C. 20005

STATEMENT OF
JOHN F. WELCH
PRESIDENT
SAFE BUILDINGS ALLIANCE

before the
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
OF THE
UNITED STATES SENATE

July 12, 1985

Thank you, Mr. Chairman. The Safe Buildings Alliance -- an association of companies that formerly manufactured asbestos-containing materials for building construction -- is pleased to appear before this Committee today. The Alliance was formed to promote a rational, scientifically-sound response to concerns raised by asbestos-containing materials in buildings, specifically:

- Practical guidance for determining when friable asbestos-containing materials in schools may pose an unreasonable risk.
- Strict training and licensure requirements for inspectors and contractors involved in assessment and corrective actions.
- Practical, cost-effective alternatives to the hazardous and expensive process of indiscriminate removal of asbestos-containing materials.

In the past year, several events have more clearly crystallized the asbestos in buildings issue and focused attention on rational responses.

First, and most significantly, yet another distinguished report has reaffirmed scientific determinations of the Ontario Royal Commission, the 1984 New Jersey Asbestos Policy Committee and other independent experts that asbestos-containing materials in schools or other buildings rarely pose significant risks to building occupants.

In late April, the United Kingdom Health and Safety Executive released an extensive study of the health effects of asbestos. Written for the government by distinguished Oxford University scientists Sir Richard Doll and Professor Julian Peto, the review "indicates that the environmental health risk from asbestos in buildings is of an extremely low order." The Doll and Peto report finds that both published studies around the world and measurements made in Britain by the Department of Environment find exposures in buildings with asbestos-containing materials are "seldom more than 0.0005" fibers/cc "above background." The report thus calculates that even a person exposed in such buildings 40 hours a week for 20 years would face a "lifetime risk of approximately one per 100,000."

Doll and Peto note that such low risks are considered by the British Royal Society to be "negligible." To put such risks in perspective, they note that a non-smoker exposed to other persons' cigarette smoke at home or work one hour per day is 90 times more likely to die of lung cancer as a 20-year resident of a building with asbestos-containing materials.

I submit for the record copies of both the British government's news release and the Doll and Peto report.

This growing body of medical and scientific opinion appears to be slowing over-reactions that, as was so dramatically documented in New Jersey last summer, prompt hasty and indiscriminate removal actions that may create hazards where none currently exist. These expert conclusions also underline the pressing need to develop regulations and guidelines for distinguishing buildings where friable asbestos-containing materials might pose significant risks from those schools which do not. Such guidelines for assessing potential hazards will not only ensure selection of the most appropriate corrective measures, but also will maximize the effectiveness of Federal assistance provided by the Asbestos School Hazard Abatement Act. Without definitive regulations, asbestos abatement efforts in schools alone, not to mention government-owned buildings, could balloon into a multi-billion dollar budgetary impact.

The second important event focusing rational responses is one of building owners becoming increasingly conscious of the desirability of taking appropriate steps to assure that asbestos-containing materials in buildings are properly managed and maintenance personal properly protected. EPA has recognized the importance of special operations and maintenance programs for buildings with asbestos-containing materials. Its just-released revision of Guidance for Controlling Asbestos-Containing Materials in Buildings devotes an entire chapter to this important subject.

As expert reviews have noted, although significant asbestos exposures do not occur for most building occupants, some maintenance activities may significantly disrupt asbestos-containing materials. It is clear that maintenance and custodial personnel, as well as certain building and construction trades, may require special worker protection rules. SBA strongly supports such standards. The Occupational Safety and Health Administration (OSHA) will issue rules this Fall for asbestos-related construction activities. Moreover, EPA recently proposed an immediately effective rule to protect public employees involved in asbestos abatement. In many states, these workers were not previously covered by the OSHA asbestos rule or approved state OSHA plans.

It is even more important that abatement workers and building occupants be protected from asbestos exposures if and when building owners determine that major abatement activities, whether they be enclosure, encapsulation or removal, are conducted. SBA has been supporting a number of initiatives to establish abatement worker and occupant protection regulations. EPA and a number of states have been working toward competency training and licensure of abatement contractors and workers. Such licensure has appropriately been tied to completion of training courses on proper precautions in asbestos abatement, personnel protection, air-monitoring, and waste disposal.

The "payback" on asbestos management programs and worker protection standards has been vastly underestimated. Materials management and worker protection embody an underlying principle of medicine -- "first do no harm." In contrast to removal, management programs protect maintenance personnel from unnecessary exposures and in so doing protect building occupants from episodic contamination from asbestos-containing materials. Asbestos material management also is cost-effective, avoids the substantial and well-defined risks of removal and, in cases where removal is appropriate, provides effective interim control.

Beyond the need for asbestos management programs and worker/occupant protection regulations, development and improvement of air monitoring techniques to assess building conditions is a third important response to asbestos in buildings issues. It is important to building assessment to be able accurately and reliably to sample and analyze building air to determine prevailing exposure levels.

Problems with use of optical microscopy to measure airborne asbestos fibers in buildings have been recognized by many experts. As a result electron microscopy analysis has an important future role. Yet, the limited use of such techniques in the past has caused them to be expensive and, because of the absence of efforts toward standardization, they are sometimes imprecise. A pressing need exists for EPA and other governmental agencies to take a leadership role in improving and standardizing electron microscopy techniques for measurement of asbestos levels in buildings.

In sum, SBA finds that the widespread attention to the asbestos in buildings issue is slowly leading toward appropriate, rational responses. Scientists and public policymakers are placing the issue in proper perspective through realization that risks to building occupants are rarely significant and that removal is often unwarranted. Further, building owners and policymakers are taking appropriate steps to assure that risks do not occur. SBA will continue to assist in this effort through support for worker and occupant protection measures, promotion of operations and maintenance programs, and through continued encouragement of development of air monitoring techniques.

Safe Buildings Alliance

Suite 1200, Metropolitan Square
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August 5, 1985

The Honorable Robert T. Stafford
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Stafford:

Attached are answers to the questions raised in your correspondence of July 18, 1985.

If the Safe Buildings Alliance can be of further assistance, please do not hesitate to call.

Very truly yours,

John F. Welch

John F. Welch
President

JFW/bwm

cc: L. Mark Wine, Esquire
Dona O'Bannon

0701080501
Chrono

QUESTION: Could asbestos building products in private homes pose a risk to tradesmen or homeowners who do repair around the house?

ANSWER: The most common asbestos-containing building products found in homes are: pipe and boiler insulation; vinyl-asbestos floor tile and sheet flooring; roofing, shingles and siding; and, to a lesser extent, wall and ceiling insulation.

When renovation, repair or replacement becomes necessary, precautions can be taken to minimize potential exposure to asbestos. These include wearing an approved respirator, wetting the asbestos-containing material prior to drilling or cutting, properly disposing debris and thoroughly cleaning the work area. General guidelines for handling products containing asbestos are presented in the Consumer Product Safety Commission - Environmental Protection Agency Booklet, Asbestos in the Home. Tradesmen and homeowners who do not take precautions may be exposed to elevated asbestos fiber levels. The magnitude of the resulting risk would depend on the intensity and duration of asbestos exposure.

QUESTION: What advice would you have for private homeowners?

ANSWER: First, obtain a copy of the CPSC-EPA booklet, Asbestos in the Home. Second, consistent with the booklet's most important recommendation, the best thing to do in most cases is to leave asbestos-containing building products in homes alone. When repairs are necessary, appropriate precautions should be taken.

THE Pickering FIRM INC.

July 10, 1985

Testimony
to the
U.S. Senate
Committee on Environment and Public Works

Mr. Chairman, Senators, I appreciate this opportunity to address the Senate Committee on Environment and Public works, regarding the technical aspects of asbestos abatement. I realize that our time is valuable, and I will keep my remarks brief and to the point. My written statement, of which you should have a copy, contains somewhat more detail.

BACKGROUND INFORMATION

My name is Wayne Tansil, and I am Director of Special Projects Development for The Pickering Firm. My responsibilities include directing Pickering's asbestos abatement consulting activities. I am also Asbestos Program Director for Gobbell·Hays·Pickering, our associate architectural firm.

The Pickering Firm is a 40 year-old Memphis-based 200-man consulting Architect/Engineer (A/E) firm, with offices in three states. We have all major engineering disciplines in-house, as well as staff architects. In addition to our standard consulting practice, we have several specialty areas, one of which is asbestos.

Pickering is one of the leading firms in the country in asbestos abatement consulting. We have provided asbestos identification and exposure assessment, asbestos management programs, abatement design and construction observation for well over 800 buildings nationwide, from Tennessee to Alaska. We are not an asbestos abatement contractor; we do not execute asbestos abatement projects - we design them and observe them to ensure they are executed per design.

We gained our national reputation in asbestos consulting because of our use of best available practice, our stringent abatement specifications, and our construction observation to enforce those specifications.

We have testified on asbestos issues, by invitation, before the U.S. EPA, the National Institute of Building Sciences and, through our associate firm, Gobbell·Hays·Pickering, before the House and Senate Appropriations Subcommittees on HUD and Independent Agencies. We were recently the only A/E firm invited to participate in an EPA sponsored work session in Washington to try to develop short and long term solutions to the problem of insurance for asbestos abatement projects.

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We have provided expert witness testimony relative to our experience in asbestos identification and exposure assessment, management programs, and abatement design and construction observation.

In summary, we are one of a small group of highly responsible, experienced firms who believe that any asbestos abatement action must be designed and executed utilizing "best available practice" methods.

EXAMPLES OF IMMEDIATE HAZARD - ABATEMENT NEEDED

A large midwest building management company recently consulted us regarding a situation in a building they own. A group of attorneys who are tenants in the building complained because a light-colored dust has to be brushed off desks each morning. The owner knows that the fireproofing on the deck above the dropped ceiling contains 50% percent asbestos, and that material is laying on top of the dropped ceiling panels. The space between the dropped ceiling and the deck above carries air to the air conditioning system; any airborne asbestos fibers in the space can be distributed throughout the area of the building served by that air conditioning system. Thus we have an apparent high exposure risk scenario.

Our recommendation was to investigate and evaluate the situation in order to develop an action plan. The dust on the desks had not been analyzed to determine if it contains asbestos. No air tests were done to check airborne asbestos fiber levels. No evaluation of friability of the fire-proofing had been done. No releaseability tests were done. They have no idea if the material on top of the ceiling panels is there due to previous damage, or if it is the result of continual deterioration. They don't even know if it contains asbestos. In short, all they really know is that the fireproofing contains asbestos, chunks of something are laying on top of the dropped ceiling panels, and dust is falling on surfaces in the area.

The owner's plan of action is to enter the plenum space at night, or over the weekend, and vacuum the tops of the ceiling panels. He does plan to use respiratory protection, protective clothing, and special vacuum cleaners used for asbestos abatement work. His rationale is that if the dust stops, the attorneys will get off his back.

He has ignored our recommendation to gather enough data to make an informed decision. If the dust doesn't contain asbestos, he is probably wasting his money. If it does contain asbestos, he may be disturbing asbestos material to the point of creating a far worse exposure risk than previously existed - and if the material on the ceiling is from continual deterioration, his vacuuming operation is wasted effort, wasted money, and increased risk, because more material will fall in addition to what he's likely to spread around in his attempted cleanup operation.

In 1984 we were asked to develop costs for removal of asbestos in the field house of a major university. Sprayed-on fireproofing on structural steel was exposed in storage areas and some usage areas throughout this large building. The material is very friable - fell at the slightest touch. One area had had nets attached to the structural steel and had been used for baseball batting practice. Asbestos had covered the floor. It was one of the worst situations I have seen anywhere. We gave them the abatement cost estimate in August 1984. Nothing has been done to date except to lock the doors of the affected area. Of course, maintenance people still can go in and out, and student helpers go in and out, getting equipment.

Here are two real-life examples of situations which need abatement now. However, one owner is treating the symptom, rather than looking for and treating the disease; the other has apparently closed his eyes.

ATTITUDE PROBLEMS

Some interested parties try to minimize the asbestos-in-buildings situation. They belittle the problem by using statistical comparisons. "Statistics indicate that you are 50 times more likely to die in 10 years of driving to and from a building, than from contracting an asbestos-related disease from working in the building." Of course, we don't know what assumptions were made in order to draw that comparison. The problem with such comparisons is that they are exactly what many building owners want - a pat answer to tenant concerns over asbestos exposure - an excuse to say, "there's really no problem; we don't need to pay an expert to evaluate a situation that's less risky than driving to work."

Gentlemen, we are not concerned with the typical, or the median building. We are concerned with identifying and dealing with the building with serious problems, that presents an immediate hazard. If the building is like either of the two I described above, the comparison is wrong: working in the building could be considerably more hazardous than driving to it. In addition, if a maintenance employee tilts a ceiling panel to look above a dropped ceiling, and gets a faceful of asbestos-containing debris, he can inhale an instantaneous dose of asbestos fibers equal to years of exposure to the OSHA occupational exposure limit of 2 fibers per cubic centimeter of air.

ERRORS OF INEXPERIENCE

What happens when a building owner does his own building inspection for asbestos? There are serious problems with inexperienced people doing asbestos survey.

Mistakes inexperienced investigators make in trying to locate asbestos-containing materials include:

Making assumptions. Our mechanical engineering staff were working on renovation of the heating system of a hospital. We recommended that before any work was done on pipes, they be checked to see if the pipe insulation was asbestos. In addition, since ceiling material had already suffered some damage, and some was visible on the floor, and would probably be further damaged during the work, we recommended checking that too. The hospital engineering staff agreed that the pipe insulation might be asbestos, but they knew the ceiling material was not. We checked it anyway. It not only contained asbestos, but a high percentage of asbestos. If our personnel had proceeded under the assumption that the ceiling material did not contain asbestos, they and hospital staff and patients could have been inadvertently exposed to high concentrations of asbestos fibers in air.

Missed materials. Surfacing materials - acoustical, fireproofing, and insulating - are relatively easy to locate. Pipe and boiler insulation is also reasonably easy to find. However, the asbestos-containing versions of many of the above look a great deal like the non-asbestos versions. It is easy for an inexperienced person to locate, sample, and confirm a non-asbestos material, and miss an asbestos material nearby. Also, there are numerous asbestos-containing materials in the miscellaneous category. These are more difficult to locate and identify, but they need to be identified in order to prevent inadvertant disturbance and exposure. There have been over 3000 types of asbestos materials manufactured, and over half are used in the building industry.

A large school district in Kentucky had an asbestos identification survey done by a laboratory who did asbestos analysis. The firm surveyed 165 buildings and took about 1200 samples of suspect asbestos-containing material. At some point, the school district apparently became concerned about the quality of the survey. They hired us to evaluate the work. In a cursory visual inspection of the 165 buildings, we noted approximately 550 additional samples which should have been taken. Some were areas missed, some were insufficient samples taken to adequately confirm analysis, some were materials missed.

Obviously nobody is perfect, but Architect/Engineer personnel - experts in building systems - are more likely to locate asbestos materials in buildings than people who are not building systems experts. For example, there were several areas in this school system which had sprayed-on acoustical material throughout a building. Examination of building records, and in some instances, the sharp eyes and experience of our survey personnel, indicated one or more building expansions. We treated these areas as separate, and took additional samples. In two instances, expansion areas turned out to be non-asbestos even though they appeared exactly like adjacent asbestos acoustical material. The acoustical material was to be removed, so identification of the non-asbestos material resulted in a substantial cost savings.

Insufficient samples. Three samples of any suspect material are a prudent number. If a negative result is obtained (i.e. no asbestos), a confirming sample is a good idea. Field mixed spray-applied materials, in particular, can have areas where the material is poorly mixed, and one sample may analyze near zero, while another may have several percent asbestos. The third sample can act as a tie-breaker, if necessary.

Poor samples. Some asbestos materials, particularly spray-applied, may be in 2 or more layers. If the sample does not penetrate all the way through the material, and get some of all layers, an asbestos material covered by a layer of non-asbestos material, may be missed.

ASBESTOS IDENTIFICATION AND EXPOSURE ASSESSMENT ISN'T SIMPLE

It should be apparent from previous discussion that locating asbestos materials is not as simple as some would like to think. Exposure assessment is equally complex, if not more so.

What is involved in asbestos identification and exposure assessment? First, a detailed examination of building records, drawings, and specifications - that can yield information about specified building materials which may contain asbestos, or about asbestos which might not be visible without demolition.

Second, a thorough visual inspection of all accessible building areas and surfaces: i.e. looking in every room, above every dropped ceiling, in janitor's closets, basements, attics, plenum spaces, pipe chases or tunnels, boiler rooms, mechanical rooms, etc., to identify suspect asbestos-containing materials.

Third, establishing a sampling plan which will provide enough samples to adequately characterize every suspect material identified.

Fourth, taking the samples in a manner which will yield a complete sample of all layers of material. In addition, taking the samples in such a manner as to minimize potential exposure to airborne asbestos fibers.

Fifth, and sometimes most critical to exposure assessment, getting adequate information regarding the material and the building. Some factors needed are the amount of asbestos, type of asbestos, extent of the material, accessibility, friability, exposure to various building populations, evidence of past damage or deterioration, potential for future damage or deterioration, present use of the building, planned future use of the building, renovation or demolition plans, and other factors which might affect the evaluation.

A cookbook, or algorithm approach to exposure assessment has been tried in various forms and by numerous agencies, and found wanting. The EPA's newly revised guidance document, not yet issued, acknowledges that their algorithm approach was unsuccessful. Simply put, trying to force an objective conclusion from subjective data, doesn't work very well. We have found that a building systems expert, trained and experienced in identification of asbestos-containing materials, is the best field investigator.

Another reason the cookbook approach falls short is that each building is different. Two similar buildings with similar asbestos materials may present markedly different exposure potentials, because of differences in application of materials, maintenance, building use, damage, deterioration, or other factors, or combinations of factors. Every exposure evaluation is site-specific.

THE ASBESTOS MANAGEMENT PROGRAM

The majority of buildings with asbestos-containing materials can be dealt with through an asbestos management program. Once the material has been identified, and no immediate hazard is evident, a management program can be developed. The basic elements of such a program begin with mapping the material on a set of drawings so that its location is clearly identified. The next step is labeling it at its location, to prevent inadvertent disturbance of the material and subsequent exposure of building occupants to airborne asbestos fibers.

It is important to identify one individual associated with building management or maintenance to act as a pivot, or clearing house, for maintenance or repair activities. In that role, he can prevent outside maintenance/repair personnel from disturbing asbestos materials without proper precautions.

Another element of the management program is orientation/training of internal building maintenance/repair personnel in precautions and handling of asbestos materials. Internal personnel should be trained, or outside personnel should be identified, to assist in dealing with repair activities such as replacing a valve in an asbestos-insulated pipe, and to handle emergency response such as a boiler failure or other situation requiring short-notice work on asbestos materials. Proper equipment should be on hand, or provided by the outside contractor.

Procedures for executing the activities described above should be specified in general, as minimum standards, in the management program. Safety/health precautions, and operating standards should not be left to the discretion of the personnel executing the work. Specified procedures not only guard against sloppy performance, and potential exposure to airborne asbestos fibers, they also provide a measure of protection against potential liability from frivolous claims associated with such work.

The procedures specified should be appropriate for the work to be done; but whatever is done, should be done using best available practice methods. Asbestos is possibly the most highly litigated issue in the U.S. court system today. The potential liabilities associated with using anything other than best available practice methods are imposing.

ASBESTOS ABATEMENT

If an immediate hazard is noted, or if as a part of an overall asbestos program, abatement is indicated, the situation becomes even more complex.

It is here that many building owners decide to try to save some money, and deal directly with a contractor, rather than getting an A/E to prepare contract documents, drawings, and specifications for the project. This has resulted in many of the horror stories concerning asbestos abatement projects which have circulated through the industry.

A few of the parameters which must be considered in abatement projects are:

Federal, State, and Local Regulations
Cost Recovery Data
Contractor Prequalification
False Profits
Building Technology
Life Cycle Costs
Energy Implications

Drawings, Specifications
Carpet
Drapery
Upholstery
Mechanical Systems
Ductwork
Restoration of Finishes
Restoration of Systems
Replacement of Fireproofing
Bid Bonds
Labor and Material Payment bonds
Fire Insurance (Fire in work area)
Comprehensive Liability Insurance
Release of Lien
Application of Materials
Schedule Work for Continued Building Occupancy
Change Orders
Payments to Contractors
Contract Documents
Limitation of Liability
Hold Harmless Agreements
Contract Management
Contractor Surveillance
Construction Observation

The Architect/Engineer is trained and experienced in handling all of the above. If they are not properly handled, the building owner can have problems ranging from expensive nuisance to expensive health/safety/liability disaster.

The actual abatement work itself, is labor-intensive and relatively straightforward. The safety and health precautions, worker and work area protection, and decontamination procedures, on the other hand, are complex and sophisticated.

It takes three elements to produce a good asbestos abatement project: a comprehensive, stringent set of documents; firm, knowledgeable, preferably full-time, construction observation; and a trained, willing, contractor work force. Without any one of the three, the project is headed for potential disaster. An improperly executed project can result in a more contaminated building than before the project.

The documents provide the best available practice standards; the good contractor adheres to the standards without trying to short-cut; and the construction observation provides enforcement and documentation that the project is actually executed as specified. Again, the drawings and specifications, and the documentation provided by the construction observation, provide the best available protection for all associated parties against potential claims associated with the project.

WHAT IS BEING DONE?

There is a strong move across the country toward training and certification of abatement contractors. Some states have already implemented such a program. There should be an equally strong movement toward training and certification of A/E firms to provide the drawings and specifications for abatement projects. At least one state has implemented this program.

Several organizations are moving toward developing standard guide specifications for asbestos abatement projects. In theory, a standard spec is a good tool - it aids the A/E to include all the potential elements needed for the project. In practice, however, there is a real danger that inexperienced, untrained A/E's will use the standard guide spec as a complete product and produce a document and thus a project, full of problems.

In addition, the untrained A/E often will not provide the level or the quality of construction observation necessary. We have taken note of A/E's who have "borrowed" our specification, but who seldom, or never visited the job site. EPA recommends full-time construction observation, and we have found that to be greatly beneficial on some projects, and absolutely essential on others.

We are beginning to train and certify contractors. We must do the same for those who are writing the specifications for these contractors, and observing their work for compliance!

Site-specific is the operative term. Every asbestos abatement project is unique, and has its own combination of parameters which must be dealt with. If the specification does not deal with them, individually and collectively, then the project has potential problems from the beginning.

Making the abatement decision is sometimes difficult. Everyone would appreciate a standard of some kind which would dictate when to abate, and when abatement is not necessary. It would take the burden off the building owner - he could abate and pass the cost on to his tenants, and be able to say "the government made me do it." Or he could tell his tenants "the government says I don't have to abate." And the law could penalize those who didn't meet the standard.

Unfortunately, the wide variation in conditions at individual sites makes it unlikely that such a standard will be forthcoming. All the factors and combinations of factors mentioned in exposure assessment, plus many of the parameters included in the list to be dealt with in the contract documents, combine to make each project unique, and each solution site-specific.

An ambient air standard has also been mentioned as highly desirable. It would influence abatement decisions, and it would end the disagreement over air quality levels for abatement project clearance for building re-occupancy. Here, too, we are unlikely to see such a standard until medical research is able to draw a line and tell us "below this level is considered safe." Even then, if the level is lower than 0.01 fibers per cubic centimeter of air, the electron microscope must be used for analysis, and there will have to be a sampling protocol and an analytical protocol established which will yield the level of accuracy necessary to document achievement of the clearance level.

The EPA Technical Assistance Program has been valuable in providing guidance for building owners in how to deal with asbestos in their buildings. The program, and the guidance documents, have grown and changed with the growth and evolution of the body of asbestos assessment and abatement knowledge. The newest version of the EPA guidance document, yet unpublished, is no exception. It provides up-to-date parameters for owners to use in making judgements in assessment and abatement.

I feel that the draft version of the new guidance document in its present form may unintentionally lead the owner toward doing his own survey and acting as his own consultant, rather than providing him with a checklist to evaluate the performance of his professional A/E. I am sure that was not the intent of those in the Technical Assistance Program and I feel that the emphasis can be shifted before publication.

WHAT SHOULD BE DONE?

We need

- Contractor training and certification nationwide (the three regional training centers established at Georgia Tech, Tufts, and Kansas are an excellent beginning.)
- A/E training and certification nationwide.
- Relief from insurance problems. Regular insurance companies are out of the market. Insurance is only available from the surplus lines - in limited quantities and at great expense.

Building owners across the country should take the prudent action of hiring an experienced A/E to provide asbestos identification and exposure assessment as a first step. They cannot logically determine what needs to be done in their facilities, if they don't know what conditions exist.

End.

THE Pickering FIRM INC

**ASBESTOS
ABATEMENT
CREDENTIALS**

We are a nationally recognized leader in the field of asbestos abatement. We submit the following for your consideration:

1. National Reputation: We have addressed asbestos issues, by invitation, before the U.S. Senate, the U.S. House of Representatives, the U.S. Environmental Protection Agency, and the National Institute of Building Sciences. We have provided expert witness testimony regarding our asbestos consulting experience, for cost recovery litigation. Mr. Wayne Tansil, our Asbestos Program Director, has conducted seminars and made presentations concerning asbestos hazard abatement to school officials, building owners and managers, architects/engineers, contractors, and government personnel in almost half the states in the U.S. including Alaska, and Washington, D.C.

2. Depth of Experience: We have provided various phases of asbestos abatement for over 800 facilities nationwide. Many projects have had special considerations, such as asbestos-contaminated dirt in crawl spaces, temporary enclosures until removal can take place, and removal in hospital environments where operations must continue throughout. We have assisted the State of Alabama in developing a model asbestos abatement specification. For the State of Tennessee we have developed a training program and guidelines to train State personnel to do a preliminary assessment of 5,000 State-owned buildings to prioritize them for complete survey and abatement action as funding becomes available.

3. Qualified Personnel: Our "Asbestos Section" personnel are registered architects and engineers, and young engineers and architects; some are experienced designers, and some have architectural or construction technology degrees. In short, they are people who understand building systems. They therefore are highly knowledgeable of where and how to look for asbestos-containing building materials. In addition, our people have attended courses sponsored by Georgia Tech and others dealing with asbestos survey, testing, abatement, medical, and legal issues. Most are certified by Georgia Tech in Supervision of Asbestos Abatement Contracts; all participate in our internal training updates.

4. Abatement Design Quality: Our abatement specifications, continually revised and updated, have been referred to by EPA as "the state of the art". Our approach is simple: "best available practice" methodology, in all aspects of asbestos work. Because of this approach, we minimize potential health hazard and legal liability for all parties--the owner, the abatement contractor, the air monitoring firm, and ourselves.

5. Summary: We have the manpower and expertise to complete projects on schedule; we have the knowledge and concern to assure that they are conducted properly and safely; and we have the experience to handle routine situations routinely, and unusual situations with imagination and innovation.

PLANNING • DESIGN • ENGINEERING • MANAGEMENT
821 SOUTH BARKSDALE • MEMPHIS, TN 38114 • TELEPHONE (901) 726-0810
HUNTSVILLE, ALABAMA • GREENWOOD, MISSISSIPPI • LITTLE ROCK, ARKANSAS

THE Pickering FIRM INC.

August 7, 1985

Senator Robert T. Stafford, Chairman
United States Senate Committee on
Environment and Public Works
Washington, D.C. 20510

Re: Asbestos Hearing: July 12, 1985

Dear Senator Stafford:

I appreciated the opportunity to address the committee at your hearing on July 12. I sincerely hope that the comments of those of us who appeared as witnesses will result in some positive action to aid asbestos abatement across the country.

I would like to reiterate a portion of my testimony: it takes three elements to produce a good asbestos abatement project. 1) A comprehensive, stringent set of documents. 2) Firm, knowledgeable, preferably full-time construction observation. 3) A trained, willing contractor work force. Without anyone of the three, the project is headed for potential disaster.

Senator Stafford, EPA and the states are only providing a portion of the equation. They are providing for the training and certification for asbestos abatement contractors. The other two elements can only come from experienced, trained Architects/Engineers. We are not seeing steps to provide that training. Trained and certified contractors can still make mistakes or can fall victim to the temptation to take shortcuts without the proper documents and observation to ensure that the project is properly executed.

We must not use standard guide specifications as a crutch to fool ourselves into thinking that we are providing proper guidance for contractors. We, at the Pickering Firm, are well aware of well-meaning A&E firms who have "borrowed" our specifications without site-adapting them to the particular project, and without providing the construction observation necessary to ensure proper execution of the project. Some of those projects had serious problems, others are potential disasters. Unfortunately, the majority of them will be carried out and people will be exposed to airborne asbestos through poor execution of the project and no one will ever know, because no one knowledgeable is watching.

Here are my replies to the questions that you posed to me in writing.

1. Could asbestos building products in private homes pose a risk to tradesman or homeowners who do repairs around the house?

   Yes, certainly. Asbestos building products in homes can run the range of materials from cement asbestos board to sprayed-on ceilings to asbestos pipe and boiler or hot water tank coverings. Anyone who unknowingly disturbs asbestos containing materials runs the risk of exposing themselves to airborne asbestos fibers.

   What advice would you have for private homeowners?

   Find out whether or not there are asbestos containing materials in their home. Have the materials identified, sampled and analyzed. Take proper precautions when working with those materials or hire people to work on them who have the proper equipment.

2. When you advise owners of public or commercial buildings that an asbestos hazard exists, do you know whether they voluntarily notify their tenants or warn their employees about it, like schools are required to do? Should they?

   We advise our clients to plan a public relations campaign at the same time they plan their asbestos identification activities. We advise them, in general, to notify the owners that an investigation is being conducted for their benefit. We then advise them to announce their proposed abatement or management plan at the same time they notify their building occupants of the results of the asbestos identification survey. We feel that they are morally obligated to notify their tenants, but we feel that it would be a disservice to simply notify them without letting them know what action is being taken to control the problem. To date, we have only had one client who has ignored our advice. It was the firm which I mentioned in my testimony: the firm which has the group of attorneys complaining about dust on their desks each morning.

Senator Stafford, please feel free for you or any of your staff to contact me directly regarding any questions you might have in the area of asbestos in buildings. I feel that our combination of experience and expertise in the actual application of abatement and management alternatives could serve you well if the need arose.

Sincerely,

THE PICKERING FIRM, INC.

Wayne Tansil

Wayne Tansil

WT/js

cc: Don Smith

American Consulting Engineers Council
1015 Fifteenth Street, N.W., Washington, D.C. 20005
202-347-7474
Telex 897445 AMCONENGRC WSH

File 206
July 12, 1985

The Honorable Robert Stafford
Chairman, Senate Environmental Committee
United States Senate
410 Dirksen Building
Washington, DC 20510

Dear Senator Stafford:

We would like to submit the following statement for inclusion in the hearing record of July 12, 1985, on asbestos in schools.

The American Consulting Engineers Council (ACEC) is a national trade association representing over 4300 engineering firms. Many of these consulting engineers are concerned with the asbestos problem since they are involved in the rehabilitation of heating, ventilating, and air conditioning systems in buildings as well as fire safety. Consulting engineers survey, monitor or design asbestos clean-up projects. They do not do the actual work, which is done by construction contractors.

We have been informed by major insurance carriers that by the end of the year or earlier there will be no professional liability insurance for firms involved in any asbestos-related work.

Because of the insurance problem, some firms have been forced into just surveying because of increased liability exposure while others have withdrawn from the business completely.

This is unfortunate, because it not only removes competent firms from the field, it opens the door for less qualified firms who have few or no assets to risk in potential lawsuits. While there are thousands of asbestos lawsuits currently in the courts, a relative few involve engineering and design work. They are mostly against product manufacturers and not design professionals. We are trying to make this point to the insurance industry. However, design professionals are subject to legal liability on any errors or ommissions they may commit. It is for this reason that they generally buy professional liability insurance. Today this is not available, and professionals cannot afford to risk their corporate or personal assets in a legal environment that requires professionals to defend against shotgun suits and the trend of courts to impose "strict liability" standards on professionals, which is to say professionals are responsible whether or not they have been negligent. It is for this reason that professionals can no longer obtain professional liability coverage.

President: ARNOLD L. WINDMAN, New York, New York. *Senior Vice President/Treasurer:* LESTER H. SMITH, JR., Nashville, Tennessee. *Vice Presidents:* EDWARD W. DAVIDSON, JR., Atlanta, Georgia. JAMES E. (BUD) MOULDER, St. Louis, Missouri. ROBERT J. SMITH, Seattle, Washington. ROBERT E. HOGAN, Dallas, Texas. DONALD R. LA ROCHELLE, Lewiston, Maine. LEONARD RICE, Denver, Colorado. *President-Elect:* LESTER H. POGGEMEYER, Bowling Green, Ohio. *Executive Vice President:* LARRY N. SPILLER

What we suggest is that Congress should take a close look at tort reform. We do not offer any specific proposal but there are many plans on the table. The purpose would not be to shield professionals from their own negligence, but to eliminate broad assertions of liability and the trend of courts to force parties to pay damages even in the absence of evidence of negligence.

Consulting engineers are known for finding answers to environmental problems. We are a profession which devises the solutions. Congress should examine closely the implications of having these competent professionals hindered in the performance of this work that is vital to the public safety.

Please note that we have enclosed two letters which discuss this professional liability problem.

Yours very truly,

Edward R. Bajer
Director of Energy,
Industrial and Interprofessional
Divisions

erb/ssc

Victor O.
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5028 Wisconsin Ave. N.W. Washington, D.C. 20016 • Phone 202 686 2850 • Telex 892340

Paul L. Genecki
Senior Vice President

May 23, 1985

Laurence D. Bory,
Director, Governmental Affairs
American Consulting Engineers Council
1015 15th Street, N.W.
Suite 802
Washington, DC 20005

Re: Professional Liability Insurance Coverage

Dear Larry:

Confirming our telephone conversation, it is now clear that at some point in the very near future, there will be no professional liability insurance coverage for claims arising out of services involving asbestos or "hazardous waste" for architects and engineers insured in the program for which we serve as underwriting managers.

Within the last month or so, it has become obvious that we will be required to impose mandatory endorsements on all policies issued in our program. These mandatory endorsements will exclude all coverage for claims and claims expenses arising out of the performance of, or failure to perform, professional services connected in any way with asbestos or "hazardous waste." At this point, we are not certain when these endorsements will be required, but it would appear that it will be no earlier than August 1, 1985 and no later than October 1, 1985.

This is a change in the professional liability insurance market. While we are not in a position to speak for others, it is a fact that professional liability insurance for design professionals can be obtained only from a very limited market, as you know, and based on information that we have received, it would seem that such coverage will not be available from any source, by year end at the latest, for claims involving asbestos and "hazardous waste."

INSURANCE

As to the endorsements we will issue, the wording has not yet been finalized, but I can tell you that, to the extent possible, the wording will match the wording proposed by the Insurance Service Office for other types of liability coverages, particularly comprehensive general liability (CGL). While it is hard to be optimistic about a change in insurer attitude in the short term which would allow us to offer some degree of coverage for "hazardous waste" exposures, we would predict that three eventualities would go a long way toward producing that result:

1. Wording in the 1985 Superfund Reauthorization bill which would embody the spirit of "the Edgar Amendment" as we have discussed and as pointed out in my statements to the House and Senate Committees.

2. The creation, by some credible body or agency (EPA), of standards which would be accepted by industry and the design professions, and most importantly, have a reasonable chance of acceptance by the courts. This would overcome one of the primary, current objections of the insurers, that there are no standards against which performance in the area of hazardous waste cleanup can be judged. Thus, there is no way for insurers to get a handle on exposure.

3. Liability coverage becoming available to other entities (e.g. owners, conctractors, etc.) would overcome the justifiable reluctance of professional liability insurers to have the only coverage on hazardous waste cleanup projects (with the inevitable result that the professional liability policy would become a very obvious target).

We will continue to keep you advised of developments and, just as soon as we have the exclusionary endorsement language, we will send you a copy. In the meantime, if you have any questions or if there is anything you wish to discuss further, please give me a call.

Cordially,

Paul L Genecki (s.H.)

Paul L. Genecki

PLG:sgh

ARMCO PROFESSIONAL SERVICES DIVISION

DARRELL M. HOSLER P.E.
Vice President Administration

May 17, 1985

Mr. James W. Poirot
Chairman of the Board
CH2M Hill
P. O. Box 22508
Denver, Colorado 80222

Dear Jim:

As we discussed by telephone this morning, I am enclosing for your information a copy of the pollution exclusion being asked for by our insurance underwriters for the 1985-86 policy year.

As I mentioned, we are going to meet with the underwriters next Wednesday morning to discuss exceptions to this exclusion in our professional liability policy. The exceptions that we have drafted so far are as follows:

1. Does not apply to bodily injury or death claims.
2. Does not apply to claim arising out of any event during construction.
3. Does not apply to any consequential damages suffered by the owner.
4. Does not apply to any remedial construction or repair of the project.
5. Does not apply to any projects involving the treatment of municipal sewage or municipal water supply.
6. Does not apply to any electric power generating stations.

It was indeed a pleasure talking with you on the telephone and I hope that we will have a chance to get personally acquainted in the future. I'll be in touch with you after our meeting with the underwriters next Wednesday to give you feedback on our ability to negotiate any changes.

Sincerely,

Darrell M. Hosler

Darrell M. Hosler

DMH/jj
cc: G. T. Bukowski

ARMCO INC • PROFESSIONAL SERVICES • [illegible] OVERLAND PARK KANSAS [illegible] • [illegible] • TWX [illegible]

Pollution Exclusion

For and in Consideration of the Premium Charged, it is Understood and Agreed that the Company Shall Not Be Obligated to:

(1) Make Payment for any Loss; or
(2) Provide Defense

In Connection with any Claim Made Against an Insured, which Claim Arises out of, Relates to, or is Based Upon, the Dispersal, Discharge, Escape, Release or Saturation of Smoke, Vapors, Soot, Fumes, Acids, Alkalis, Toxic Chemicals, Liquids, Gases or any other Material, Irritant, Contaminant or Pollutant in or into the Atmosphere, or on, onto, upon, in or into Surface or Sub-Surface:

(a) Soil:
(b) Water or Watercourses;
(c) Objects;
(d) Any Tangible or Intangible Matter;

Whether Sudden or Not.

This Exclusion Applies to any Claim by Whomever or Whatsoever Made, including, but not Limited to, any Public, Private or Governmental Person, Concern, Body, Entity, Agency, Office or Corporation.

STATEMENT OF THE
AMERICAN FEDERATION OF TEACHERS, AFL-CIO
BEFORE THE COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE
July 12, 1985

Members of the American Federation of Teachers (AFT), are greatly affected by hazardous asbestos in schools. Accordingly, the AFT welcomes the opportunity to place our views on the Asbestos School Hazard Abatement Act of 1984 (ASHAA) and on the Environmental Protection Agency's program before this Committee. The AFT commends the Chairman and members of this Committee for their efforts in holding this hearing and for the Committee's continuing pursuit of a solution to the problem of asbestos hazards in schools.

AFT's members strongly support your efforts to find a safe resolution to the serious problem of friable asbestos in the schools. Because we represent more than half a million teachers and other school-related personnel in primary and secondary education, we speak for people who may themselves be placed at risk if a solution is not found for our asbestos problem. The AFT also represents thousands of state employees and health care professionals who work in hospitals and health facilities that could also be affected by asbestos contamination. Most importantly, our union acts as an advocate of policies which serve our nation's children. We have a special obligation to students, an obligation that includes providing them with an education aimed at excellence in an environment free from avoidable health risks. In our view, the presence of friable asbestos in our schools is a danger to the health and well-being of millions of students. The only proper response to this danger is (1) adequate federal financing for any necessary asbestos abatement, including full funding of ASHAA and (2) the swift enactment of regulations by the Environmental Protection Agency for uniform federal standards for the assessment and removal of asbestos hazards.

Friable asbestos is considered and recognized to be one of the most toxic substances in the environment, particularly in schools and public buildings. Yet not very long ago, asbestos was considered a safe and desirable material for building construction. From the end of the Second World War until the early 1970's, asbestos was widely used in many schools and public buildings as an insulator for heat, cold and noise and as a fire retardant. Asbestos could prevent heat loss but more importantly, it could reduce the warping of steel beams in the case of school fire. This property of asbestos could prevent structural collapse and allow rescuers time to evacuate endangered students and staff. In buildings throughout the country, asbestos was either sprayed or troweled on beams and ceilings in an effort to make buildings safer.

Ironically, the substance which once was thought to potentially save the lives of students, teachers and other school personnel may today be a significant threat to their health. It is universally recognized that asbestos is carcinogenic and could lead to lung cancer, mesothelioma, asbestosis and numerous other diseases. The scope of the asbestos problem is staggering. In 1984 the Environmental Protection Agency (EPA) estimated that 31,000 school buildings contained friable asbestos. By conservative estimates, 15 million children and 1.4 million school personnel could be at risk. Children are considered more at risk than adults. Because of their level of activity, those exposed to asbestos at a young age are more likely than adults to develop diseases related to asbestos at some point in their life.

The AFT is mindful and appreciative of the fact that ASHAA is law today in great part because of the work of this Committee. We believe that passage of ASHAA was an enormous first step in addressing the serious public health problem of asbestos in schools and in firmly establishing the need for a significant federal presence and role in tackling this problem. ASHAA has significantly contributed to increased public awareness of the asbestos problem, as is evidenced by the interest in these hearings today. It is appropriate that you are holding these oversight hearings now, for we believe that increased public awareness of the magnitude of the problem will continue to translate into increased public pressure—and demands—for immediate effective corrective action.

The AFT urges Congress to fully fund ASHAA and hopes that this Committee will again assume a pivitol role in assuring that adequate funding is obtained. When Congress passed ASHAA in 1984, it authorized $600 million over seven years for technical and financial assistance to schools for abatement of asbestos health hazards. For FY 1984, $50 million was authorized and appropriated - $45 million for actual clean-up, $5 million for EPA administrative costs. School districts applied for $530 million in assistance to remove asbestos from 4,800 schools and, last month, the $45 million was awarded to 341 schools ranked by the EPA as having the most severe asbestos problems. Clearly, this funding is woefully insufficient to meet even current stated needs, let alone to meet the estimated $3 billion needed for a total clean-up of our schools. Regretfully, the Senate Appropriations Committee recommended only $5 million for FY '85 when

$50 million was authorized. We strongly urge that, for FY '86, the Senate fund ASHAA at its authorized level of $100 million.

Several matters relating to the implementation of ASHAA warrant Committee attention. Specifically, the period for schools to apply for ASHAA funds should be considerably longer than the two months allowed for recent applications. The application process is complex and many schools had insufficient time to apply. Further, the AFT recommends that standards applied to assessing the financial needs of public and private schools be standardized. Currently, private schools are ranked on the basis of the operating budget per pupil while public schools are ranked on the basis of per capita income. The EPA should apply the same standard for both.

Mr. Chairman, the AFT commends the EPA for its efforts in implementing ASHAA, particularly in providing guidelines for schools receiving ASHAA funds. Recipients of ASHAA funds must (a) follow EPA procedures for evaluating and abating hazardous asbestos; (b) use only EPA certified contractors for proper abatement; (c) advise and protect school personnel performing corrective action and; (d) follow EPA guidelines for disposal of asbestos materials. However, schools which were not awarded federal funds are not required to follow such procedures. Currently, there are no federal regulations establishing uniform standards for assessment and removal of hazardous asbestos. It is in this area where the EPA's action comes into serious question.

The AFT has attempted, in a reasonable manner, to inform our members of the potential hazards facing them, their students and their children. We have heeded the advice of members of Congress, scientists, EPA staff and others who have counseled against taking an alarmist or hysterical approach about the extent and actual hazard of the problem. Yet, we find it incomprehensible that, with all the documented evidence of the dangers of the presence of friable asbestos, the EPA has failed to act in a responsible manner as the regulatory agency mandated with protecting the public from toxic substances.

Between 1973 and 1976, the EPA issued regulations banning the further use of asbestos in buildings. In 1979, the EPA instituted a technical assistance program which was designed to urge school districts to voluntarily identify and abate asbestos hazards. And in 1982, the EPA issued regulations which required all public school districts and private elementary and secondary schools to inspect for asbestos, analyze any friable material, and, where friable asbestos is found, to notify the school employees and the children's parents of its presence.

What is significant, however, is what EPA has refused to do and that is to (1) issue clear uniform standards for determining when asbestos is hazardous, and (2) require the abatement of hazardous asbestos. Schools are only required to inspect for hazardous asbestos. If found, there is a requirement to notify but no requirement that the asbestos be removed. Because there are no federal regualtions establishing uniform standards and no requirements for effective abatement, schools which are not eligible or were not awarded federal funds are not required to take corrective measures. Tragically, many school districts not receiving ASHAA funds which are voluntarily removing hazardous asbestos are improperly doing so, and health experts agree that improper abatement often causes more adverse health problems than the hazardous asbestos itself.

EPA officials claim that regulations establishing uniform federal standards for hazard assessment and corrective action are not necessary because their asbestos school program is working. EPA's own documents point to the contrary. A 1984 EPA evaluation of the "Identification and Notification Rule" revealed only 11% of all school districts were in compliance with all aspects of the rule, and only 4% of school districts containing at least one building containing hazardous asbestos were in full compliance. Further, the study revealed that in many instances where school district officials believed they had successfully completed the abatement work, the EPA and state officials disagreed as to the quality and adequacy of the work.

The AFT believes Congress must act now to require EPA to issue uniform federal regulaltions requiring all schools and educational institutions to assess for asbestos hazards and to establish federal standards for corrective action. Adequate funding, coupled with uniform federal standards, is clearly the course to pursue to assure that local abatement efforts are properly conducted, that federal funds are well spent and that health risks for our children are minimized. Failure to pursue any other course will be nothing short of a national disgrace.

opeiu#2/aflcio

ASBESTOS IN THE SCHOOLS COALITION

FOR INFORMATION Geri Palast, SEIU, 1313 L St, NW, Washington, DC 20005 (202)898-3360
or Joel Packer, NEA, 1201 16th St, NW, Washington, DC 20036 (202)822-7329

June 3, 1985

The Honorable James Abdnor
United States Senate
Washington, D.C. 20510

Dear Senator Abdnor:

We are writing on behalf of our organizations which represent parents, teachers and other school employees, school board members, school superintendents, private schools, and concerned citizens, to urge your support for a $50 million FY 85 supplemental appropriation for the Asbestos School Hazard Abatement Act (ASHAA).

As you know, ASHAA was enacted in 1984 and authorized a total of $600 million over seven years for EPA to provide urgently needed financial and technical assistance to aid local schools in abating asbestos health hazards. While initial funding of $50 million was provided in an FY 84 supplemental appropriations bill, no funds have been appropriated for FY 85.

EPA is in the final stages of determining which schools will receive funds from this initial $50 million. However, applications have been received which total over $530 million for assistance for more than 8300 abatement projects. The total for the top priority categories alone, based on the degree of health hazard, exceeds $250 million. Without question, an urgent need exists to provide additional funds, which can be quickly distributed by EPA to local schools.

While concern has been expressed about the quality of previously performed abatement work, we are confident that abatement work performed in schools using ASHAA funds will be done in an appropriate, safe, and quality manner. EPA has, as directed by Congress, distributed to schools which applied for ASHAA funds a document that sets forth standards for determining contractor qualifications, interim guidelines for evaluating asbestos hazards and abatement actions, procedures for worker protection and for disposal of removed asbestos.

In fact, EPA has stated it will condition ASHAA awards to schools on the selection of a contractor who meets EPA's qualifications.

It has been well documented that even at very low exposure levels asbestos can increase the risk of lung cancer and mesothelioma. Children have been found to have a greater chance than adults to develop asbestos-related diseases. While states and local school districts have been struggling to meet the very large financial burden of asbestos abatement, there is a desperate need for additional Federal assistance.

We once again urge your support for a $50 million FY 85 supplemental appropriation for the Asbestos School Hazard Abatement Act.

Sincerely,

National Education Association
Service Employees International Union, AFL-CIO
American Association of School Adminstrators
American Federation of State, County, and Municipal Employees
American Federation of Teachers, AFL-CIO
Citizen Action
Council for American Private Education
Council of Chief State School Officers
Council of the Great City Schools
National PTA
National School Boards Association
New York City Board of Education
New York State Department of Education
U.S. Public Interest Research Group

ASBESTOS IN THE SCHOOLS COALITION

FOR INFORMATION Geri Palast, SEIU, 1313 L St, NW, Washington, DC 20005 (202)898-3360
or Joel Packer, NEA, 1201 16th St. NW. Washington, DC 20036 (202)822-7329

QUESTIONS AND ANSWERS ON ASBESTOS IN THE SCHOOLS

1. Q. What exactly is asbestos?

A. Asbestos is actually a variety of naturally-occurring fibrous mineral silicates. Because of its special characteristics, such as its fine retardant and sound insulating abilities, asbestos was commonly used in building construction. Especially between 1946 and 1973, thousands of schools were constructed or remodeled with asbestos.

2. Q. What are the health effects of exposure to asbestos?

A. According to the Environmental Protection Administration (EPA), "Exposure to high levels of airborne asbestos is associated with a debilitating lung disease called asbestosis; a rare cancer of the chest and abdominal lining called mesothelioma; and cancers of the lung, esphagus, stomach, colon, and other organs." Even at very low exposure levels, lung cancer and mesothelioma can result from asbestos. Children have a greater risk of developing some of these diseases than do adults.

3. Q. Is all asbestos-containing material harmful?

A. No. In order to pose a health threat, the material must release asbestos fibers into the air. The majority of exposure problems occur when asbestos-containing materials become flakey, or "friable," meaning they can be easily crumbled, pulverized or reduced to power by hand pressure.

4. Q. How widespread is asbestos in schools?

A. According to EPA, asbestos hazards are present in more than 31,000 school buildings affecting 1.4 million school employees and 15 million students. A recent (March 1985) GAO sample of 36 school districts found more than 50% of their 4,062 school buildings have had friable asbestos, and that as of October 30, 1984, more than 1400 still do.

5. Q. What regulations has EPA established to ensure removal of this health hazard?

A. Actually, none. EPA did issue regulations in 1973 under the National Emission Standards for Hazardous Air Pollutants (NESHAPS) that banned the use of spray-applied asbestos-containing materials for fireproofing or insulating purposes. In 1975, the ban was amended to include all methods of asbestos application. In 1978, the ban was further broadened to prohibit all uses of asbestos in buildings.

In addition, in 1982, EPA issued its "Friable Asbestos-Containing Materials in Schools, Identification and Notification Rule." This regulation required that all elementary and secondary schools, both public and private, must, by June 28, 1983, inspect for asbestos, analyze any friable material, and where friable asbestos is found notify the school employees and the children's parents of its presence.

However, EPA has refused to issue regulations that establish clear standards for determining when asbestos is hazardous and that require abatement of the health hazards.

6. Q. Why has EPA refused to issue regulations to require removal of asbestos health hazards?

A. EPA was formally petitioned in November 1983 to promulgate such rules. However, a year later, after several public hearings where the large majority of witnesses supported the petition request, EPA stated, "We do not agree that federal regulation is the best approach for deciding whether to abate potential health hazards in schools and other public and commercial buildings... Further, there is strong evidence that the current EPA program for handling potential asbestos hazards in schools is working."

The reality is that EPA's own study found that by January 1, 1984 (over six months past EPA's deadline for compliance with its inspection rule) only 11% ± 2% of all school districts were in compliance with all aspects of the rule, and only 4% ± 2% of the school districts with at least one building containing asbestos were in full compliance.

7. Q. How expensive is it for schools to abate the health hazards?

A. The costs can vary depending on what method of abatement is used. In addition to complete removal, other methods include encapsulation, enclosure, and special operations and maintenance procedures. The American Association of School Administrators (AASA) in a recent study estimated the costs of removal at $50,000 per school building. The more recent GAO study, based on 36 school districts, found that removal costs have been as high as $15 million for a large urban district, and averaged over $1.4 million. In addition, 27 of these districts estimated they would have future expenditures of almost $290 million, or an average of $10.7 million per district.

Whatever the estimates, it is clear that the total clean-up cost will run into the billions of dollars.

8. Q. What legislation has the Congress enacted to assist schools in removing asbestos?

A. In 1984, the Congress passed the Asbestos School Hazard Abatement Act (Title V, P.L. 98-377), which authorized, within EPA, a program of technical and financial assistance to schools for abatement of asbestos health hazards. A total of $600 million over seven years (FY84-FY80) was authorized. So far, only an initial $50 million has been appropriated in FY84. EPA is in the process of implementing this new program. Awards to school districts, based on the magnitude of the health hazards, will be made in June, 1985. School districts have applied for over $530 million in assistance to remove asbestos in more than 8300 projects.

9. Q. Has the Administration requested additional funding for this program?

A. No. The President's FY86 budget requests no additional funding for either FY85 or FY86.

10. Q. What actions should the 99th Congress take to help resolve this problem?

A. A broad coalition of organizations, including the National Education Association, the Service Employees International Union, the National PTA, the National School Boards Association, the American Association of School Administrators, the American Federation of Teachers, and The Council for Advancement of Private Education have called upon Congress to do two things.

First, to approve an FY85 supplemental appropriation of $50 million for the Asbestos School Hazard Abatement Act and an additional $100 million for FY86.

Second, to conduct hearings into EPA's refusal to issue standards and mandated abatement rules and to consider legislation which would mandate that EPA promulgate such rules.

JP mca

May 24, 1985

Community High School District 99

Administrative Service Center
1860 Sixty third Street • Downers Grove, IL 60516 • (312) 968-5454

Office of Superintendent

June 10, 1985

Senator Alan J. Dixon
317 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Dixon:

This letter is to communicate a problem that the Board of Education and citizens of Community High School District 99, Downers Grove, Illinois, has recently experienced regarding its systematic asbestos abatement program. The issue relates directly to asbestos abatement contractors and liability insurance. What I am presenting is an issue that has resulted in a very negative and expensive predicament for our school district and its taxpayers.

Both of District 99's high schools have a substantial asbestos problem. Over the past three months a systematic program of abatement has been developed and approved by the Board of Education. Steps to implement the program have been initiated - including the advertisement and awarding of bids. Our problem stems from the fact that qualified contractors are having their liability insurance cancelled as a result of working with asbestos.

Most school districts in our area have decided to take a "wait and see" attitude in spite of the statutory time limit of July 1, 1989 for asbestos abatement or encapsulation. Our situation does not provide us the option of "waiting to see." At our North campus, old boilers MUST be replaced. In order for contractors to complete this task, asbestos MUST be removed from the boilers and boiler room area. At our South campus corroding water piping must be replaced throughout the building, but first asbestos MUST be removed from those pipes. Our Board had no recourse but to complete at least this portion of the abatement program.

As a result of the cancellations, only one of the 5 bidders now meet our bid specifications. The one meeting the bid specifications is also the high bidder. While several others were qualified they were not able to meet the insurance specifications. This cancellation practice has cost the taxpayers of District 99 $500,000 in Phase I and potentially a lot more unless changes are coming. I hope you can begin to see the impact of this predicament. We need assistance and relief!

Our school district is doing everything it can to be rid of this most undesirable and potentially hazardous material - asbestos. The most recent cancellation of insurance liability is not only preventing us from proceeding with what must be done but it is also requiring us to pay an absolute premium for the required work. This condition exists for all public schools, not just ours. If this letter presents you with even half the understanding of our precarious predicament - it has achieved its goal. I am committed to finding our school community relief from this situation and to this end, if I may provide further information and assistance, please do not hesitate to contact me.

Sincerely,

David F. Hendrix, Superintendent

DFH/sc

cc: Ms. Heidi Biederman

CONTAINER
PRODUCTS
CORPORATION

P. O. Box 3767
Wilmington, NC 28406
919-392-6100

July 20, 1985

Senator Robert T. Stefford
Chairman of Committee on Environment
and Public Works
U.S. Senate
Washington, D.C. 20510

SUBJECT: Asbestos - Removal Of; Problems Equipment Manufacturers Are Experiencing On Obtaining Liability Insurance

Dear Senator Stefford:

Relative to your recent hearing on the many problems associated with asbestos removal, it is the purpose of this letter to bring to your attention and to document for the record, the subject problem currently being experienced by equipment manufacturers in obtaining liability insurance.

Specifically, we are designers and manufacturers of equipment. Recognizing a need in the asbestos abatement industry for a safer and more efficient and cost effective method to remove asbestos, we designed equipment to fill this need.

However, due to the fact we have been unable to obtain liability insurance, the only course of action left open to us was to put this program on a "hold" status until such time as we are able to obtain adequate liability insurance.

Obviously, we did not want to take this action, and we did so as a last resort, and only after we were unable to obtain insurance.

It is therefore pertinent to note we speak of this problem common to industry with first-hand experience and knowledge gained by a very aggressive and all-out effort to obtain insurance.

To this end, we explored all avenues available to us and contacted, in the main, every reliable insurance company and their underwriters in the United States.

Further, we solicited assistance from other knowledgable sources including Service Employee International Union, National Asbestos Council, National Association of Asbestos Abatement Contractors, EPA, and OSHA.

Despite our best efforts however, and assistance from others, the fact is insurance for asbestos removal equipment manufacturers is simply not available.

It is evident lack of availability of such insurance adversely impacts the Asbestos Removal Program in many ways - - two of the most important in our judgement being as follows:

> First, it discourages legitimate abatement contractors from seeking abatement contracts and conversely encourages "fly-by-nights" to remove asbestos without adequate insurance and possibly by means not favorable to the public's health, and,
>
> Second, it discourages equipment designers and manufacturers from spending their capital monies to research, develop, and provide safer and more effective asbestos removal equipment for use by legitimate abatement contractors.

Summarizing - it is a well recognized fact that the need is great to "get on" with the program of removing asbestos . . . from our schools, factories, industrial and institutional buildings, offices, and homes.

We at Container Products Corporation had a great idea and we are now ready to make available America's newest and safest asbestos removal system.

Will you help us obtain the liability insurance we need?

Sincerely,

Joel Hughes
Director/Special Programs

JJH/pc

P.S. Also, may we please be placed on the mailing list to receive transcripts of meetings you or others may hold on this subject.

cape
COUNCIL FOR AMERICAN
PRIVATE EDUCATION
1625 Eye Street, N.W., Washington, D.C. 20006

(202) 659-0016
Robert L. Smith
Executive Director

July 26, 1985

The Honorable Robert T. Stafford
Chairman
Committee on Environment and Public Works
U.S. Senate
410 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the Council for American Private Education (CAPE), I am pleased to submit a statement to the Committee on Environment and Public Works for the record of oversight hearings on the Asbestos School Hazard Abatement Act of 1984. CAPE represents through its 15 member organizations approximately 75% of the nation's private schools. Its member organizations, whose schools enroll 4.2 million students, are deeply concerned with the serious problem of hazardous asbestos in our nation's schools.

I want to begin by thanking members of the Committee who have worked for enactment of this important Act and for those who have continued to work for its funding and efficient administration. It is commendable that the Committee is conducting oversight hearings to assure that EPA is carrying out the Congressional mandate as provided in the Asbestos School Hazard Abatement Act of 1984.

Furthermore, I want to acknowledge our gratitude to the Chairman and other members of the Committee who ensured that all schools with hazardous asbestos, whether public or private, can participate equitably in the grants and loan program.

I think that everyone today is in agreement about the hazards of asbestos. We now know of the threat it poses to school children and school personnel and to people in other public and commercial buildings. The most recent studies conducted by the Federal government estimate that nearly 15 million children and 1.4 million school employees are potentially at risk because they occupy buildings that contain friable asbestos containing materials.

As you are well aware, there has been a great deal of public concern about this problem and considerable criticism of EPA's actions in this area. The serious problem still exists and in the process of detection and abatement, new problems have developed. Many schools are reluctant to undertake abatement activities without technical and financial assistance. Schools complain that EPA offers little guidance and that consultants offer conflicting advice. It's difficult to find competent architects, contractors and engineers to take on the projects. Furthermore, insurers increasingly are dropping or refusing liability coverage for contractors, engineers and others involved in asbestos removal. Recent studies emphasize that if asbestos is removed improperly, fibers are released, creating even more of a hazard.

The legislation authorizes the EPA to promulgate standards specifying the circumstances in which abatement actions should be undertaken and the training and other requirements that contractors must meet in order to qualify for abatement work.

While some EPA officials have privately recommended that the agency proceed with a rulemaking for setting standards for abatement, thus far EPA has chosen to leave these matters to the individual states, and only a handful of the states have attempted to develop their own standards. If schools are mandated to remove hazardous asbestos, then the resources from the federal, state and local levels should be available in closer proportion to the need.

We urge Congress to take the following critical steps:

1. Allocate adequate funds for a continuation of the Asbestos School Hazard Abatement program. One year of funding at half the authorized level did not eliminate serious asbestos hazards which continue to plague our nation's school children. Hundreds of schools continue to need federal assistance to meet their problems.

2. Standards for abatement must be set by EPA. States can not be counted on to solve this glaring inadequacy in the handling of the removal problem nation-wide. Only a handful of states have developed standards despite the seriousness of the health hazard. This is a national health issue for which federal leadership is needed.

3. If there is a program in 1985-86, we urge that sufficient time be given for EPA consultation with educational groups to be sure the process and forms are as usable and effective as possible. This is a particular concern of the private school community whose schools are organized, managed and financed in a manner totally different from that of public schools.

For the record, we would like to comment positively about the work of EPA's staff in completing the grants process under the severe time constraints in the first year of the program. Private school representatives successfully worked with EPA staff in Washington to determine how private schools could be judged and ranked according to the financial need provisions.

Mr. Chairman, we appreciate your work and the efforts of other members of Congress for addressing the dangers related to asbestos hazards which threaten our nation's school children and personnel.

Thank you for this opportunity to provide our views to the Committee.

Respectfully submitted,

Robert L. Smith
Executive Director

NSBA
FEDERAL RELATIONS

Dr Mack J Spears
President

Thomas A Shannon
Executive Director
Michael A Resnick
Associate Executive Director
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Katharine L Herber
Legislative Counsel
Edward R Kealy
Director, Federal Programs

TESTIMONY

on behalf of

THE NATIONAL SCHOOL BOARDS ASSOCIATION

on the

ASBESTOS IN THE SCHOOLS HAZARD ABATEMENT ACT (ASHAA)

before the

ENVIRONMENT AND PUBLIC WORKS COMMITTEE
U.S. Senate

Submitted for the Record
July 26 , 1985

NATIONAL SCHOOL BOARDS ASSOCIATION
1680 Duke Street, Alexandria, Virginia 22314 / (703) 838-6722
serving American education through school board leadership

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I. Preface

The National School Boards Association is pleased to submit this statement for the record to the Senate Committee on the Environment and Public Works. The National School Boards Association is the only major education organization representing school board members who govern the nation's public school districts. Throughout the nation, approximately 95,000 of these individuals are Association members. These people, in turn, are responsible for the education of more than 95 percent of the nation's public school children.

Currently marking its forty-sixth year of service, NSBA is a federation of state school board associations, with direct local school board affiliates, constituted to strengthen local lay control of education and to work for the improvement of education. Most of these school board members are elected public officials. Accordingly, they are politically accountable to their constituents for both education policy and fiscal management. As lay unsalaried individuals, school board members are in the rather unique position of being able to judge legislative programs purely from the standpoint of public education, without consideration to their personal professional interest.

II. Introduction

The members of the National School Boards Association (NSBA) have always been dedicated to providing a safe and healthy environment for the nation's public school children. During the school building boom of the 1950's and 1960's, many school districts prided themselves on their ability to build the most modern educational facilities available. Based on current building codes, local school boards approved plans and specifications that incorporated modern fireproofing, soundproofing, and insulation materials. These boards wanted only the best and safest educational environment for their school children and employees.

Local school boards had no reason to suspect, certainly not on the basis of any warning from manufacturers, that the asbestos contained in those materials would prove to be a pernicious, silent threat to the health and lives of the school children. Not until 1973, did the Federal Environmental Protection Agency (EPA) sound a warning of a potential problem in schools by banning some uses of spray-on asbestos products in construction.

However, now in 1985, it is well known that asbestos is a highly toxic substance capable of causing cancer and the slow-death of asbestosis; that children are more susceptible than adults to these health effects; that the presence of friable asbestos in building materials is an immediate threat to the health of all who are exposed to it; and that thousands of school buildings across the nation contain such materials constituting a potential danger to many school children and school employees. The reality today is that asbestos in our public schools is a national problem of significant dimensions.

NSBA has given a high priority to efforts to effectively and expeditiously address the serious health hazard asbestos poses to the nation's school children. NSBA has supported both the Asbestos School Hazard Detection and Control Act of 1980 and the Asbestos in the Schools Hazard Abatement Act of 1984. Both laws have provided mechanisms to detect and abate the school asbestos hazard. NSBA has worked to facilitate our members awareness of and participation in the provisions of these acts. It has also sought information from members on the extent of the asbestos problem in their schools and the problems encountered in the effort to remove or abate asbetos hazards.

In order to assist the Committee on the Environment and Public Works carry out its oversight function in regard to the Asbestos in the Schools Hazard Abatement Act of 1984 (ASHAA), NSBA has interviewed representatives of state school board associations in a number of states receiving a significant amount of grant funding under ASHAA. The concerns and recommendations presented in this testimony are based on those interviews.

III. Concerns of Local School Boards with ASHAA Grant Program

Local school boards have been under an EPA mandate to inspect school buildings for asbestos hazards and to notify the public of findings since 1981. The Committee should note that local school boards have a keen awareness of the need to be responsive to the asbestos hazard in schools. At least 96% of local school board members are elected public officials (others are appointed by locally elected leaders) and many seek the seat through their involvement as parents of children in the public schools.

Local school board members want to eliminate this public health hazard as quickly as possible. In general, then, school boards view a program of federal assistance as a definite asset to the expeditious abatement of asbestos. Therefore, the fact that in 1985 federal funds have finally been distributed to needy schools for asbestos abatement projects — while long overdue — is a positive step in the eyes of local school board members.

However, many local school boards attempting to cope with asbestos hazards have noted significant problems with the federal government's approach to the problem as embodied in ASHAA and as administered by EPA. These concerns are in the areas of: the level of funding provided for abatement projects, the complexity of the ASHAA application process, the lack of national standards for asbestos hazards, and the need for more effective technical assistance and support from EPA.

A. Inadequate Levels of Funding:

EPA has conservatively estimated that in 1984, friable asbestos-containing materials were present in 31,000 school buildings throughout the country. All estimates of the cost of abatement far exceed $1 billion. Yet only $45 million was available in grants and loans under ASHAA for Fiscal Year 1985. It is particularly disturbing that EPA has not requested any budget authority for Fiscal Year 1986.

EPA received 1108 applications for 5095 schools this spring for a total of $539 million in asbestos-cleanup projects during the first year of the ASHAA program. Since the application process was highly accelerated to meet Congressional mandates for expeditious distribution of funds, it is reasonable to assume that not all eligible schools were able to apply in the first year of the program. For example, in Pennsylvania alone, the Pennsylvania School Boards Association reports that the cost of asbestos containment and removal is conservatively estimated at $300 million.

Clearly, the extent of the problem requires higher appropriation levels, at least to the full authorization of $100 million. In the current round of grant and loan awards, EPA was able to fund projects in only 340 schools, significantly less than 10% of the total of 5095 schools that were included in all applications for 1985. Furthermore, Dr. John A. Moore himself, EPA's Assistant Administrator for Pesticides and Toxic Substances, indicated in his testimony to the Committee that of all grants submitted, a total of $200 million in project requests were rated in the top two hazard categories of asbestos exposure in the schools.

Despite this overwhelming need for federal assistance, EPA has taken the position that funding asbestos removal is best left to the state and local level. However, to date, five years after the Congressional mandate to detect asbestos, only New Jersey has implemented a specific program of state aid for asbestos abatement projects. Many local school boards have initiated abatement projects at considerable local expense and, as a result, scarce budgetary and borrowing resources have had to be diverted from the improvement of direct instructional services to children.

In addition, those districts who acted promptly and completed their projects before December 31, 1983, found themselves ineligible for funding under ASHAA's retroactivity limit regardless of their financial need. For example, the Birmingham, Alabama Board of Education spent $1,137,000 on asbestos clean-up projects in recent years. But due to the retroactivity limit, it qualified for only a $49,810 ASHAA loan award.

Local school boards also face many financial constraints of wealth and income factors which make it difficult to expeditiously act on asbestos hazards. While the ASHAA program contains provisions which attempt to take financial need into account, many other related fiscal pressures are not addressed. Some of these additional constraints are:

1) Voter rejection of bond issues
2) Voter rejection of tax increases
3) Voter rejection of the school budget or school budget increases
4) State limitations on per pupil expenditure
5) State limitations on budget increases and tax increases
6) Costs of meeting other federal and state mandates such as school desegregation, programs for the handicapped, school bus replacement, student/teacher ratios, etc.
7) Fixed obligations on salary contracts, insurance, debt service, etc.
8) Limited funding from state legislatures.

The combination of local economic conditions and the realities of the above constraints make significant levels of federal funding essential if school boards are to expeditiously cope with the asbestos health hazard in the schools.

B. Burdensome and Complex Application Process

School boards also expressed concern over the complexity of the application process which was particularly burdensome for smaller school districts. Applicants had to provide detailed information on their budget, taxing capacity and bonding capacity in addition to extensive information concerning each asbestos abatement project proposed for funding.

Larger districts with professional staff familiar with federal grants and with access to electronic management information systems were better able to cope with the application procedure. However, a number of smaller districts reported that key staff had to spend several weeks preparing the application and found it long, complex, and esoteric. Some districts found it necessary to hire an outside consultant or a lawyer to guide them through the process. Clearly, in a grant program as highly competitive as ASHAA, such an application process can disadvantage school districts who have an obvious and compelling asbestos hazard problem but little experience with the federal grant process. In the case of a health hazard as serious as asbestos exposure, grant awards should not be dependent on mere grantsmanship or on the extent of administrative resources available to a school.

C. Lack of National Standards for Asbestos Hazards

Now that federal grants and loans are being awarded under ASHAA for school asbestos abatement projects, it is even more imperative that EPA issue clear national standards for what degreee of asbestos exposure constitutes a health hazard and what methods of abatement are acceptable. Local school boards are understandably frustrated when they find that EPA requires them to inspect and report on asbestos hazards, thus publicly identifying a serious problem, but then does not provide adequate guidance to deal with the physical problem of abatement.

EPA wants to leave these questions to state government. However, school boards are not finding this a satisfactory solution. The New Jersey School Boards Association reports, for example, that the New Jersey Department of Health is leaning toward encapsulation as an acceptable abatement procedure while the New Jersey Department of Education favors removal. Local school boards who are ready to proceed with abatement projects are caught in the middle wondering what procedure will ultimately prevail as the acceptable standard. If state level involvement is desirous, EPA should consider establishing minimum standards for state licensing of inspectors and contractors for example.

In surveys and interviews with school board members, NSBA has consistently found that local boards would generally welcome national standards governing asbestos hazards and abatement. Local school boards cannot and should not have to determine whether or not asbestos in their schools is hazardous to children and school employees.

D. Need for Improved EPA Technical Assistance and Support

School boards who are attempting to deal responsibly with asbestos hazards are meeting with several obstacles. First, they have confronted a shortage of qualified contractors and properly trained asbestos removal workers. EPA is now attempting to provide technical assistance and training centers to alleviate this situation but its disinterest in requesting continued funding for the program puts the future of these efforts in doubt. Second, school boards are finding it virtually impossible to obtain adequate protection against potential liability resulting from asbestos removal projects.

The Kentucky School Boards Association reports that the Louisville Public Schools have halted a $5 million asbestos abatement program because contractors and architects cannot obtain liability insurance coverage. The Pennsylvania School Boards Association reports similar problems. On July 1, Lloyds of London, a major insurer of asbestos projects, put a hold on underwriting any future projects.

Once again, local school boards who are trying to act reponsibly to deal with the asbestos problem are finding that no one, certainly not the EPA, has properly researched and developed the resources necessary to carry out abatement projects in an expeditious manner.

E. ASHAA Grant Award Criteria

In addition to the concerns noted above, NSBA is troubled by certain aspects of the ASHAA grant criteria which may unfairly disadvantage school board applicants.

First, while ASHAA mandates that EPA make grant awards without distinguishing between public and non-public school applicants, the grant application uses two different measures of financial need. Public school districts were asked to provide estimated per capita income of the locality while private schools were asked to provide data on their school operating budget per pupil. Furthermore, the states were to certify the data provided by public school districts as to their revenue raising capacity. Since the states could not attest to the revenue raising capacities of private schools, it is difficult to see how EPA could be confident of the validity of the private schools' self-assessments. On the basis of these diffferences alone, it appears that EPA is holding public schools to a more stringent standard of financial need than the non-public schools in the grant award process.

Second, the involvement of the state Governors in the determination of the priority asbestos removal projects in their states as required by ASHAA raises the question of the objectivity and comparability of the prioritization process. At a minimum, the Governors should be required to adopt and publish their criteria for determining priority projects. This would help local school boards to determine whether it would be fruitful to pursue funding under this program. In addition, EPA should be required to review the Governors' prioritization of projects to determine whether criteria for ranking school asbestos hazards are being applied consistently and fairly among the various states.

IV. NSBA Recommendations

NSBA submits the following recommendations for ASHAA to the Committee based on our members' experience with the program to date.

- Seek the full funding authorized for ASHAA in FY 86 ($100 million)
- Require EPA to publish clear and consistent national standards concerning asbestos hazards
- Require EPA to simplify the ASHAA application process, particularly for smaller school districts
- Require EPA to provide better technical assistance and support in the areas of qualifications of contractors and obtaining liability protection for asbestos removal projects
- Require EPA to use comparable criteria for determining financial need among public and non-public schools
- Require the Governors to publish criteria for ranking asbestos removal projects.

V. Conclusion

The members of NSBA are fully committed to the task of abating asbestos hazards in schools. NSBA strongly supports a federal role in the effort to expeditiously address this public health catastrophe through ASHAA. However, NSBA also takes the position that when the federal government sounds the alarm and announces a health crisis in the public schools as it did through the EPA inspection rule, it has the responsibility to assist local school boards with: adequate levels of funding to overcome the problem; clear and consistent standards for resolving the problem; and thorough technical assistance to expedite the solution.

UNITED STATES CATHOLIC CONFERENCE
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Office of the Secretary

August 19, 1985

The Honorable Robert T. Stafford
Chairman, Committee on Environment
and Public Works
United States Senate
410 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the United States Catholic Conference, I am pleased to submit a statement to the Committee on Environment and Public Works for the record of oversight hearings on the Asbestos School Hazard Abatement Act (ASHAA) of 1984. The United States Catholic Conference is the civil agency of the Catholic Bishops of the United States. Presently, there are approximately 10,000 Catholic elementary and secondary schools with an enrollment of nearly 3.4 million students operating in the United States. To help ease the financial burden of asbestos hazard abatement, Congress provided that private and parochial schools would be as eligible as public schools to share in the loan/grant programs under the ASHAA program.

The Environmental Protection Agency, on June 5th, 1985, completed its first cycle of funding under the ASHAA by awarding $45 million to 198 school districts for 417 separate abatement projects in 340 schools. The number of projects funded are meager in relation to the massive size of the problem across the country. The ASHAA authorized $50 million for FY85 and $100 million for each of the five succeeding fiscal years. We strongly encourage the Commit-tee in particular, and Congress in general, to appropriate the funds authorized for each fiscal year to help alleviate this drastic national problem.

We also call upon this Committee to amend the ASHAA by adding a "by-pass provision" which would permit private and parochial schools to participate in the abatement loan grant program in the event a state is prohibited by law from administering this program for such private and parochial schools, or because a state elects not to participate in the abatement programs because it is using state appropriated funds for abatement projects. In many states, state funds cannot be used for the benefit of private and parochial schools.

The State of Virginia elected not to participate in the 1985 ASHAA loan/grant award program because it was using state funds to abate asbestos hazards, and also because it was prohibited by its constitution from administering the program for private sectarian schools. Consequently, no private or parochial school in Virginia was eligible to participate in the ASHAA program. We recommend the adoption of a by-pass provision to remedy such situations.

Finally, for the record, we would like to commend the EPA's Asbestos Action Program staff for completing the loan/grant process under the severe time constraints in the first year of the program. Private school representatives successfully worked with the EPA staff in Washington to facilitate the participation of private schools in the program.

Mr. Chairman, we appreciate your work and the efforts of other members of Congress for addressing the dangers related to asbestos exposure which threaten our national school children and personnel.

Thank you for this opportunity to provide our views to this Committee.

Respectfully submitted,

Thomas G. Gallagher

Rev. Thomas G. Gallagher
Secretary for Education

TGG/pvf